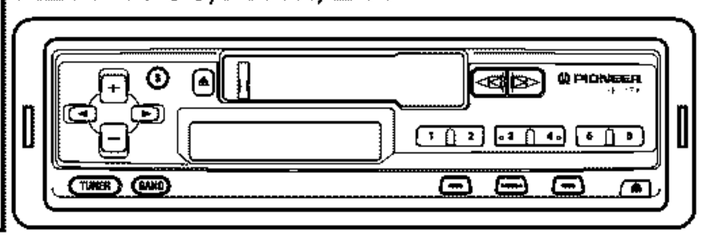
Service Manual

PIONEER®
The Art of Entertainment

KEH-1700/X1M/EW



ORDER NO.
CRT2133

HIGH POWER CASSETTE PLAYER WITH FM/MW/LW TUNER

KEH-1700 X1M/EW
KEH-1730 X1M/EW

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1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely, you should mot risk trying to do so and refer the repair to a qualified service technician.

2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING

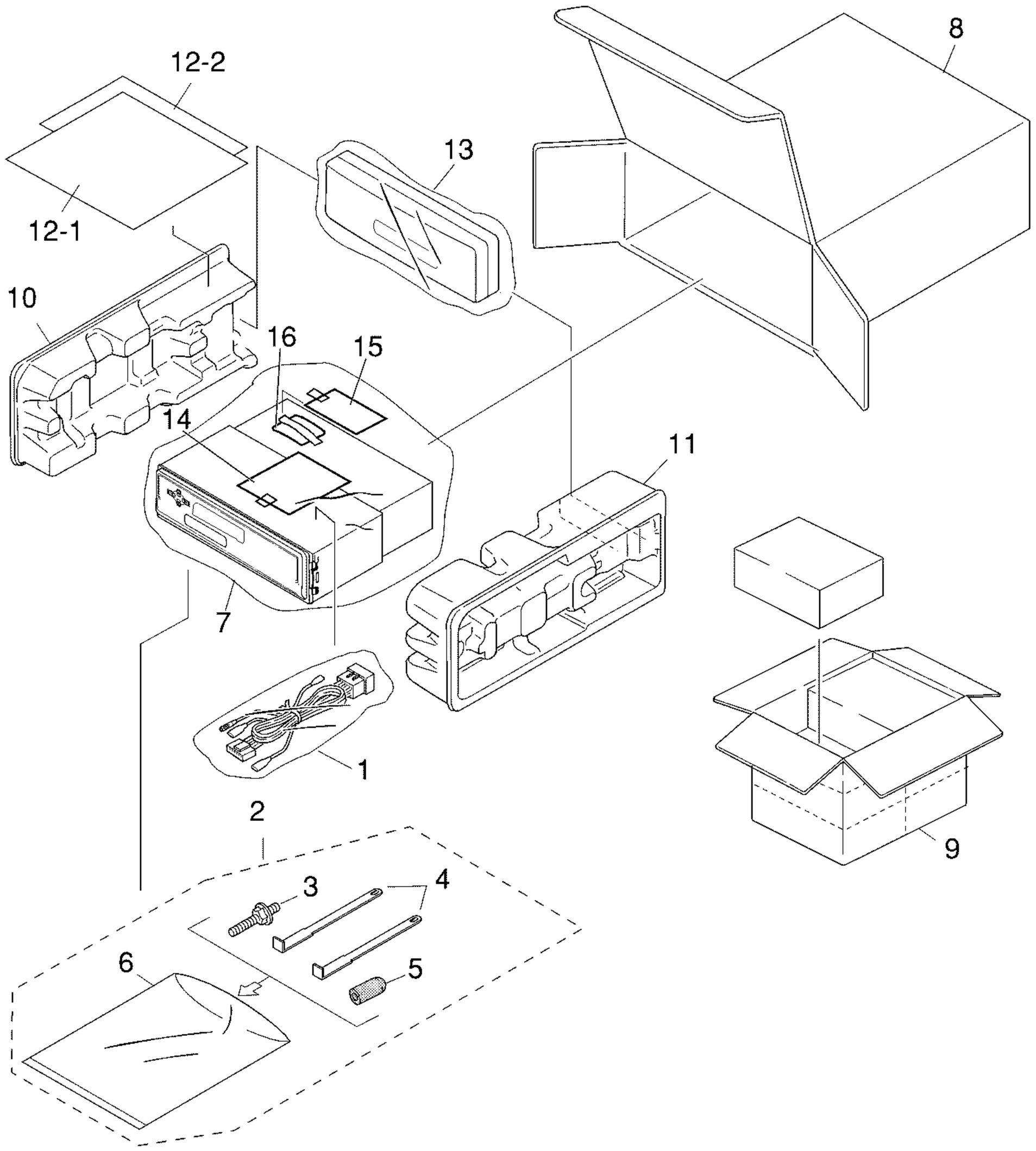

Fig. 1

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NOTE:

- Parts marked by "*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.

● PACKING SECTION PARTS LIST

Mark	No.	Description	Part No. KEH-1700/X1M/EW	Part No. KEH-1730/X1M/EW
	1	Cord Assy	CDE5498	CDE5498
	2	Accessory Assy	CEA2397	CEA2397
	3	Screw	CBA1002	CBA1002
	4	Handle(x2)	CNC5395	CNC5395
	5	Bush	CNV3930	CNV3930
*	6	Polyethylene Bag	E36-615	E36-615
	7	Polyethylene Bag	CEG-162	CEG-162
	8	Carton	CHG3452	CHG3453
	9	Contain Box	CHL3452	CHL3453
	10	Protector	CHP1622	CHP1622
	11	Protector	CHP1623	CHP1623
	12-1	Owner's Manual	CRD2552	CRD2552
*	12-2	Warranty Card	CRY1087	CRY1087
	13	Case Assy	CXB1063	CXB1063
*	14	Caution Card	CRP1174	CRP1174
*	15	Caution Card	CRP1176	CRP1176
*	16	Silica Gel	AEN7001	AEN7001

● Owner's Manual

Part No.	Language
CRD2552	English,Spanish,German French,Italian,Dutch

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2. EXPLODED VIEWS AND PARTS LIST

2.1 EXTERIOR

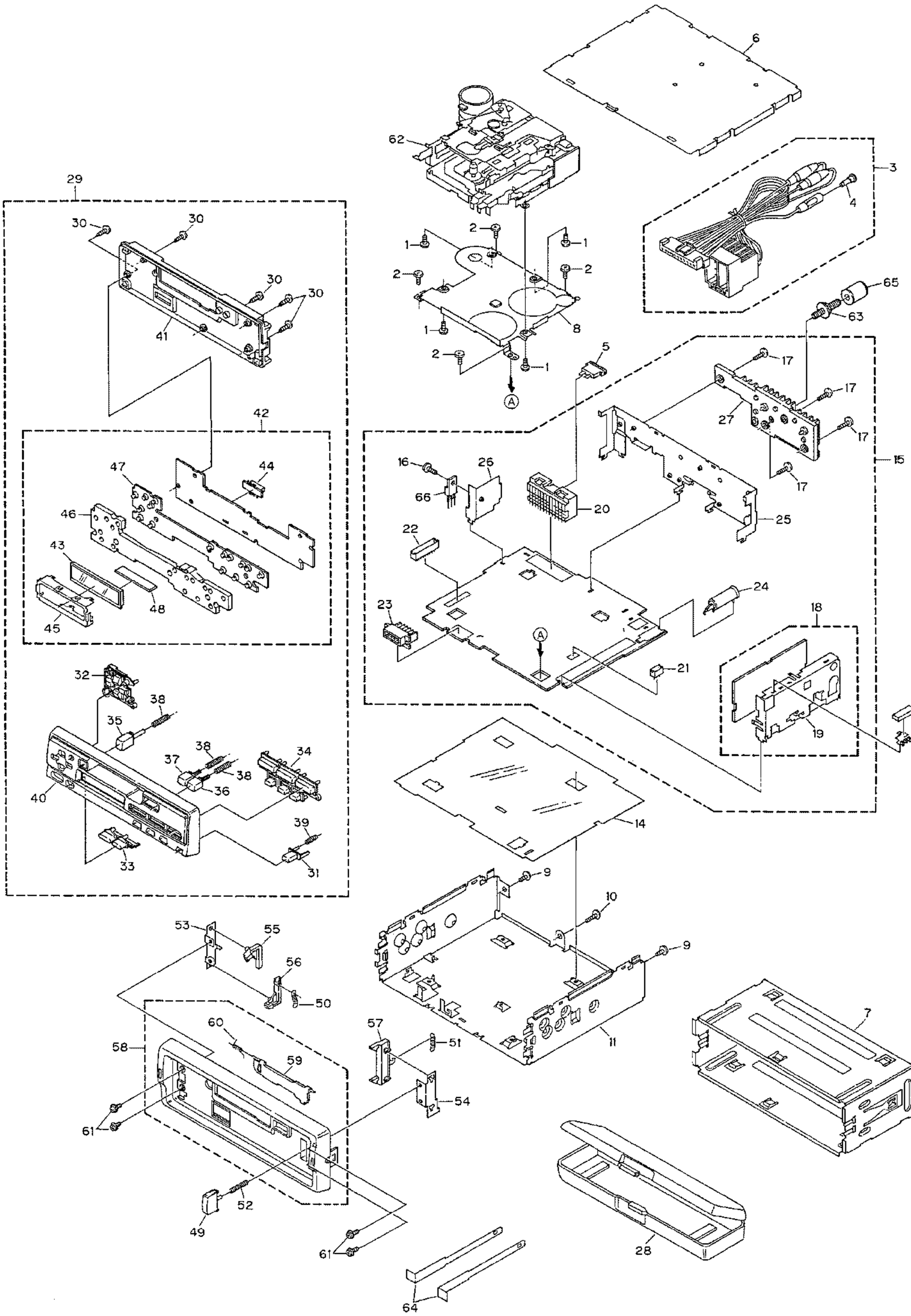

Fig. 2

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(1) EXTERIOR SECTION PARTS LIST

Mark No.	Description	Part No.
1	Screw	BMZ26P040FMC
2	Screw	BSZ30P050FMC
3	Cord Assy	CDE5498
4	Terminal Cover	CKX-003
5	Fuse	CEK1136
6	Case	CNB2251
7	Holder	CNC6798
8	Holder	CNC7450
9	Screw	BSZ30P050FMC
10	Screw	BSZ30P120FMC
11	Chassis	CNA1978
12	Holder	CNC5704
13	Cushion	CNM4870
14	Insulator	CNM5564
15	Tuner Amp Unit	CWM5703
16	Screw	BSZ30P080FMC
17	Screw	BSZ30P100FMC
18	FM/AM Tuner Unit	CWE1466
19	Holder	CNC6554
20	Plug(CN601)	CKM1270
21	Plug(CN604)	CKS-567
22	Plug(CN605)	CKS-572
23	Connector(CN902)	CKS3581
24	Antenna Jack(CN501)	CKX1056
25	Panel	CNB2252
26	Holder	CNC7470
27	Heat Sink	CNR1460
28	Case Assy	CXB1063
29	Detach Grille Assy	See Contrast table(2)
30	Screw	BPZ20P120FZK
31	Button(⏏)	See Contrast table(2)
32	Button(+,–,◁,▷)	See Contrast table(2)
33	Button(TUNER,BAND)	CAC5455
34	Button(1,2,3,4,5,6)	See Contrast table(2)
35	Button(⏏)	See Contrast table(2)
36	Button(FF)	See Contrast table(2)
37	Button(REW)	See Contrast table(2)
38	Spring	CBH2074
39	Spring	CBH2103
40	Grille	See Contrast table(2)
41	Cover	See Contrast table(2)
42	Keyboard Unit	See Contrast table(2)
43	LCD(LCD901)	CAW1462
44	Connector(CN901)	CKS3580
45	Holder	CNC7313
46	Lighting Conductor	CNV5105
47	Rubber	CNV5194
48	Connector	CNV5209
49	Button	CAC4836
50	Spring	CBH1834
51	Spring	CBH1835
52	Spring	CBH1996
53	Bracket	CNC6135
54	Bracket	CNC6791
55	Arm	CNV4692
56	Arm	CNV4693
57	Arm	CNV4728
58	Panel Unit	See Contrast table(2)
59	Door	CAT1765
60	Spring	CBH2126
61	Screw	IMS20P030FZK
62	Mechanism Assy	CZX3050
63	Screw	CBA1002
64	Handle	CNC5395
65	Bush	CNV3930
66	Transistor(Q959)	2SD2395

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(2) CONTRAST TABLE

KEH-1700/X1M/EW and KEH-1730/X1M/EW are constructed the same except for the following:

Mark No.	Description	Part No. KEH-1700/X1M/EW	Part No. KEH-1730/X1M/EW
29	Detach Grille Assy	CXB1629	CXB1630
31	Button(⏏)	CAC4870	CAC4993
32	Button(+,–,◁,▷)	CAC5454	CAC5330
34	Button(1,2,3,4,5,6)	CAC5456	CAC5326
35	Button(⏏)	CAC5457	CAC5327
36	Button(FF)	CAC5458	CAC5328
37	Button(REW)	CAC5459	CAC5329
40	Grille	CNS4632	CNS4634
41	Cover	CNS4633	CNS4645
42	Keyboard Unit	CWM5710	CWM5711
58	Panel Unit	CXB2090	CXB2091

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2.2 MECHANISM ASSY

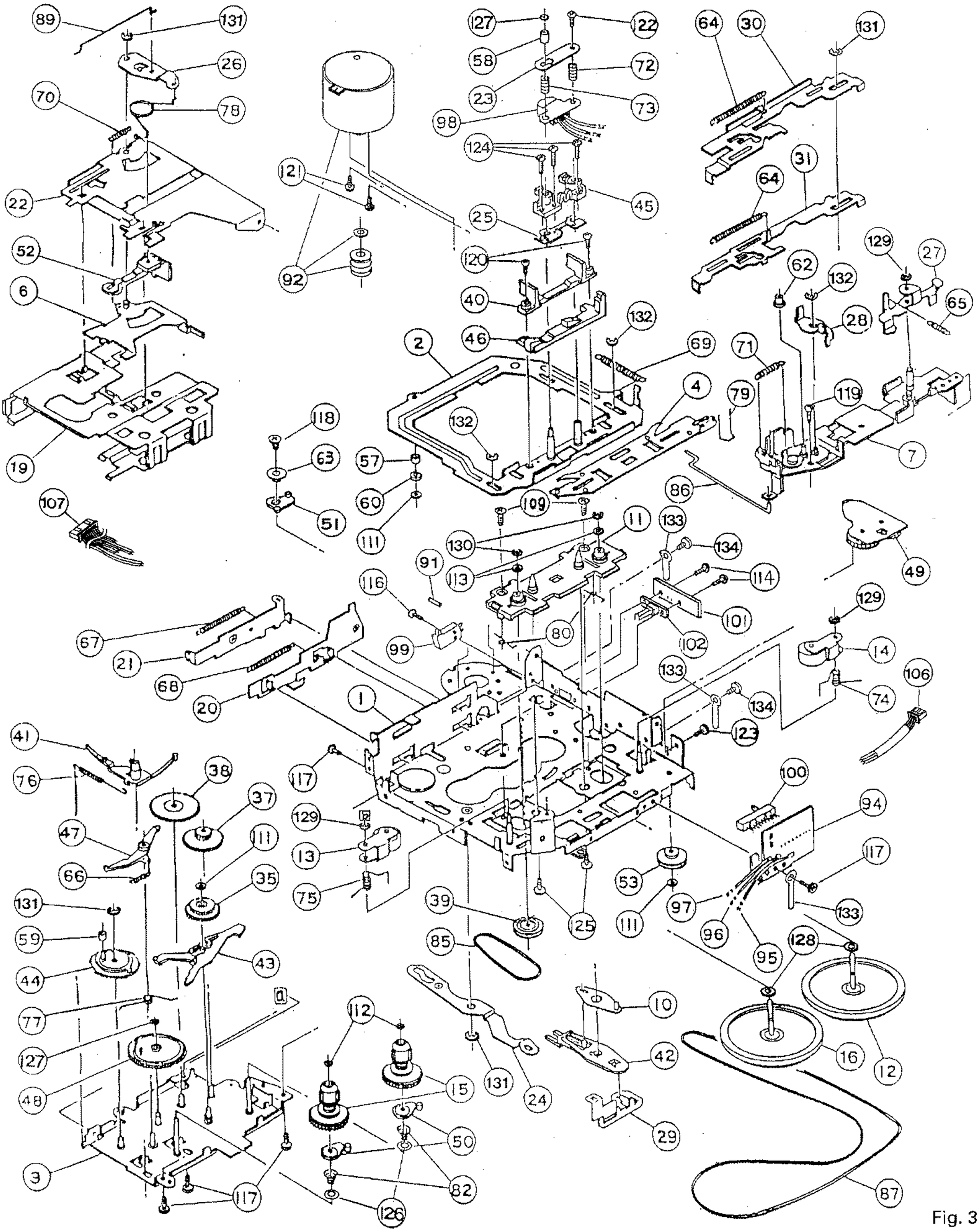

Fig. 3

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● MECHANISM ASSY SECTION PARTS LIST

Mark No.	Description	Part No.
1	Main Chassis Assy	X-0036-1001
2	Head Plate Assy (S)	X-0036-6082
3	Reel Base Assy	X-0036-1009
4	FR Changing Arm Assy	X-0036-1010
5	•••••	
6	Eject Cam Lock Assy	X-0036-1019
7	Lever Bracket Assy (D)	X-0036-6077
8	•••••	
9	•••••	
10	FR Arm (A) Assy	X-0036-1025
11	CM Bracket Assy (PH)	X0138-2006-5
12	Flywheel Assy (BF)	10036-6010-0
13	Pinch Arm (R) Assy (PS)	1-0036-6013
14	Pinch Arm (F) Assy (PS)	1-0036-6014
15	Reel Spindle Assy (D)	X-0036-6081
16	Flywheel Assy (BR)	10036-6010-1
17	•••••	
18	•••••	
19	Cassette Holder (X)	1-0138-1010
20	Eject Cam	1-0036-1006
21	Eject Lever	1-0036-1007
22	Cassette Hanger (X)	1-0138-1002
23	SPG Support Plate	1-0036-1015
24	Conversion Lever	1-0036-1016
25	Adjuster Shim (X)	1-0138-1006
26	Center Plate	1-0036-1018
27	Lock Arm (A)	1-0036-1029
28	Change Lever (B)	1-0036-1023
29	FR Arm (B)	1-0036-1026
30	FF Lever (AT)	1-0036-1051
31	REW Lever (AT)	1-0036-1053
32	•••••	
33	•••••	
34	•••••	
35	Idle Gear	1-0036-2001
36	•••••	
37	Reduction Gear (A)	10036-2004-0
38	Reduction Gear (B)	1-0036-2003
39	Pulley Gear	10036-2005-0
40	Tape Guide	1-0038-2018
41	Ratchet	1-0036-2007
42	FF Arm	1-0036-2008
43	Sensor Arm	1-0036-2009
44	Selector Gear	1-0036-2010
45	Adjuster Arm (B)	10138-2005-3
46	Adjuster Link (X)	1-0138-2004
47	Gear Lock Arm	1-0038-2014
48	Detector Gear	1-0036-2014
49	TU Gear Arm Assy	X-0036-2015
50	Detector Cam Assy	X-0136-2001
51	Mute Arm (N)	1-0038-2034
52	Tape Hooker	1-0058-2004
53	Idle Pulley (A)	10058-2021-5
54	•••••	
55	•••••	
56	•••••	
57	HP Roller (B)	1-0036-3024
58	FF Roller (C)	1-0038-3071
59	Collar	1-0036-3018
60	HP Roller (A)	1-0036-3002
61	•••••	
62	Program Roller	1-0038-3012
63	Mute Arm Collar	1-0038-3015
64	FF/REW Lever Spring	1-0036-4001
65	Lock Lever Spring (A)	1-0036-4022
66	Gear Lock Arm Spring	1-0036-4003
67	Eject Lever Spring	1-0036-4004
68	Eject Cam Spring	1-0036-4005
69	Head Plate Spring	1-0036-4006
70	Eject Cam Lock Spring	1-0036-4007
71	Program Arm Spring	1-0036-4008
72	Adjuster Arm Spring (A)	1-0036-4010
73	Adjuster Arm Spring (B)	1-0036-4011
74	Pinch Arm Spring (F)	1-0036-4012
75	Pinch Arm Spring (R)	1-0036-4013
76	Ratchet Spring	1-0038-4014
77	Dash Spring	1-0036-4015
78	Center Plate Spring (B)	1-0036-4023
79	Changing Arm Spring	1-0036-4017
80	Earth Spring (R)	1-0036-4018
81	•••••	
82	Back Tension Spring	1-0138-4001
83	•••••	
84	•••••	
85	Sub Belt (C)	1-0036-5018
86	Selector Link (B)	1-0138-5001
87	Main Belt	1-0036-5020
88	•••••	
89	Return Link	1-0036-5006
90	•••••	

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Mark No.	Description	Part No.
91	Insulate Tube	1-0058-5016
92	Motor Assy(M1)	X-0036-6075
93	•••••	
94	SW PWB	1-0036-7001
95	Wire (A)	1-0036-7002
96	Wire (B)	1-0036-7003
97	Wire (C)	1-0036-7004
98	Head(HD1)	10036-7016-1
99	Power Switch(SW1)	1-0036-7034
100	Slide Switch(SW3)	1-0036-7007
101	Mute PWB	1-0138-7002
102	Mute Switch(SW2)	1-0138-7087
103	•••••	
104	•••••	
105	•••••	
106	Head Wire Assy (PN)	1-0036-7107
107	Wire Assy (SP)	1-0036-7108
108	•••••	
109	Screw(M1.7×3)	213317030-C2
110	•••••	
111	Washer	WT12D030D025
112	Washer	1-0036-5023
113	Washer	WA21D032D025
114	Screw(M1.7×4)	213317040-C2
115	•••••	

Mark No.	Description	Part No.
116	Screw(M1.7×6)	213317060-C2
117	Screw(M2×3)	213820030-C2
118	Screw(M2×4)	213620040-F2
119	Screw(M2×4)	213320040-C1
120	Screw	JGZ20P070FZK
121	Screw	JGZ20P025FZK
122	Screw	JFZ20P040FZK
123	Screw	UFZ20P030FZK
124	Screw(M2×5)	1-0138-5002
125	Screw(M2×5)	1-0036-5005
126	Washer	1-0136-5001
127	Washer	1-0036-5024
128	Washer	1-0036-5028
129	Washer	YE15FUC
130	Washer	217116032-96
131	Washer	YE20FUC
132	Washer	YE25FUC
133	Lug Plate	217326280-36
134	Screw(M2.6×2.5)	213326025-C2

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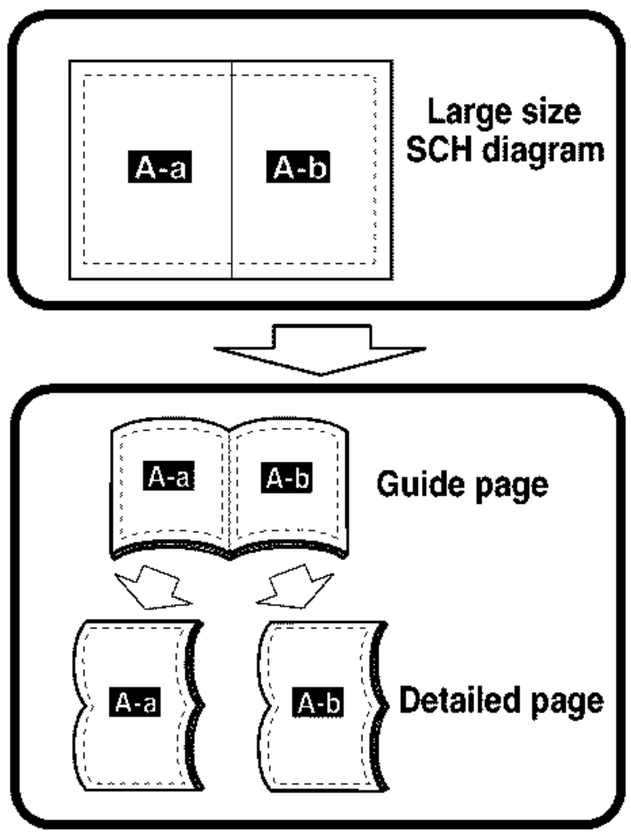
3. SCHEMATIC DIAGRAM

3.1 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



A-a

A TUNER AMP UNIT

B FM/AM TUNER UNIT

IC601 PD4875A SYSTEM CONTROLLER

IC451

IC251 LA3161P (EQ GAIN +49dB)

Q961 DTC114ES

Q962 2SA933S

Q963 DTC114ES

Q965 2SB1242

Q966 DTC143TS

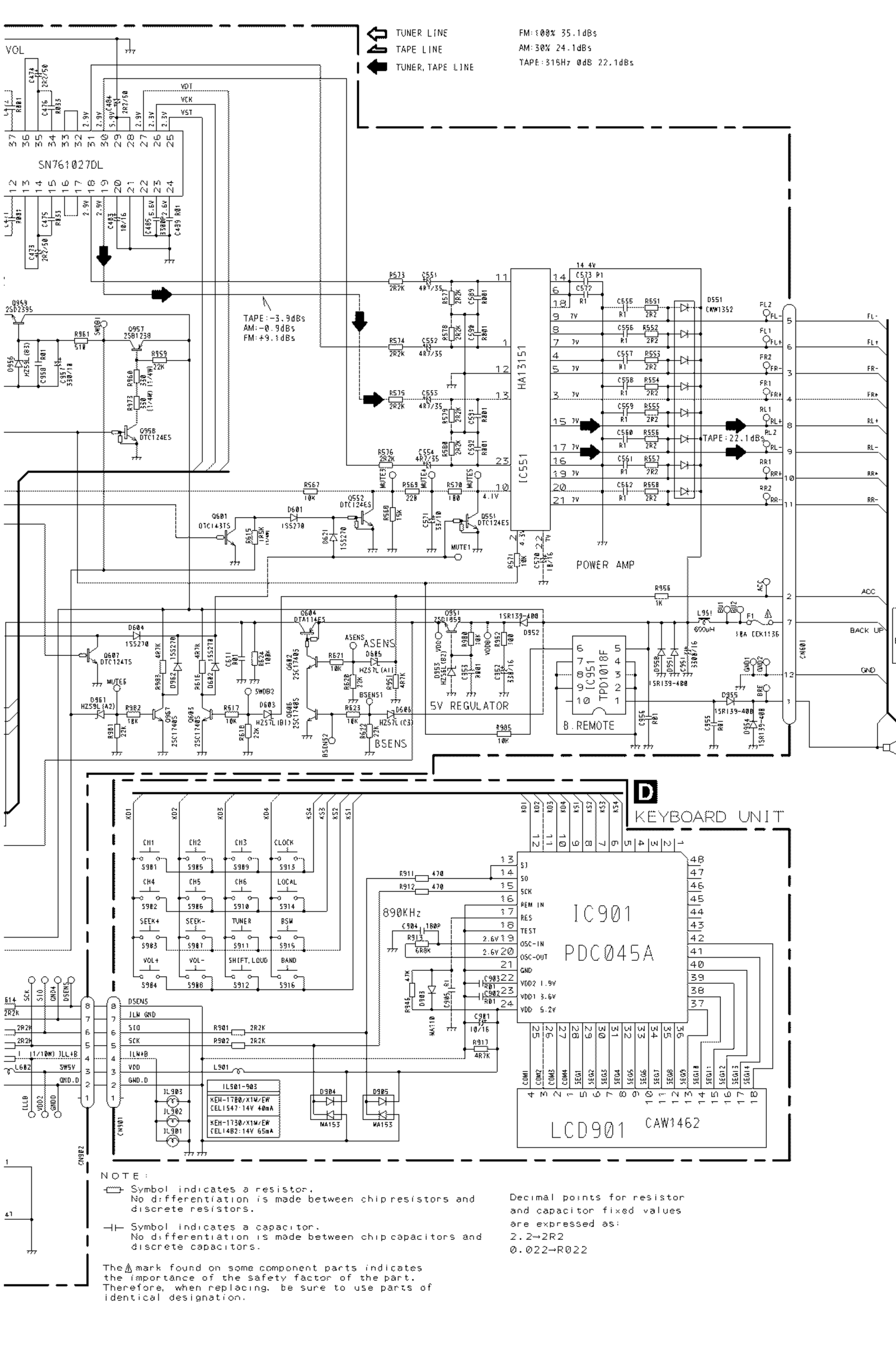
CN684

CN685

C CE MECHANISM ASSY

A-b

A-b



NOTE :

Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.

Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.

The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Decimal points for resistor and capacitor fixed values are expressed as:
2.2→2R2
0.022→R022

Fig. 4

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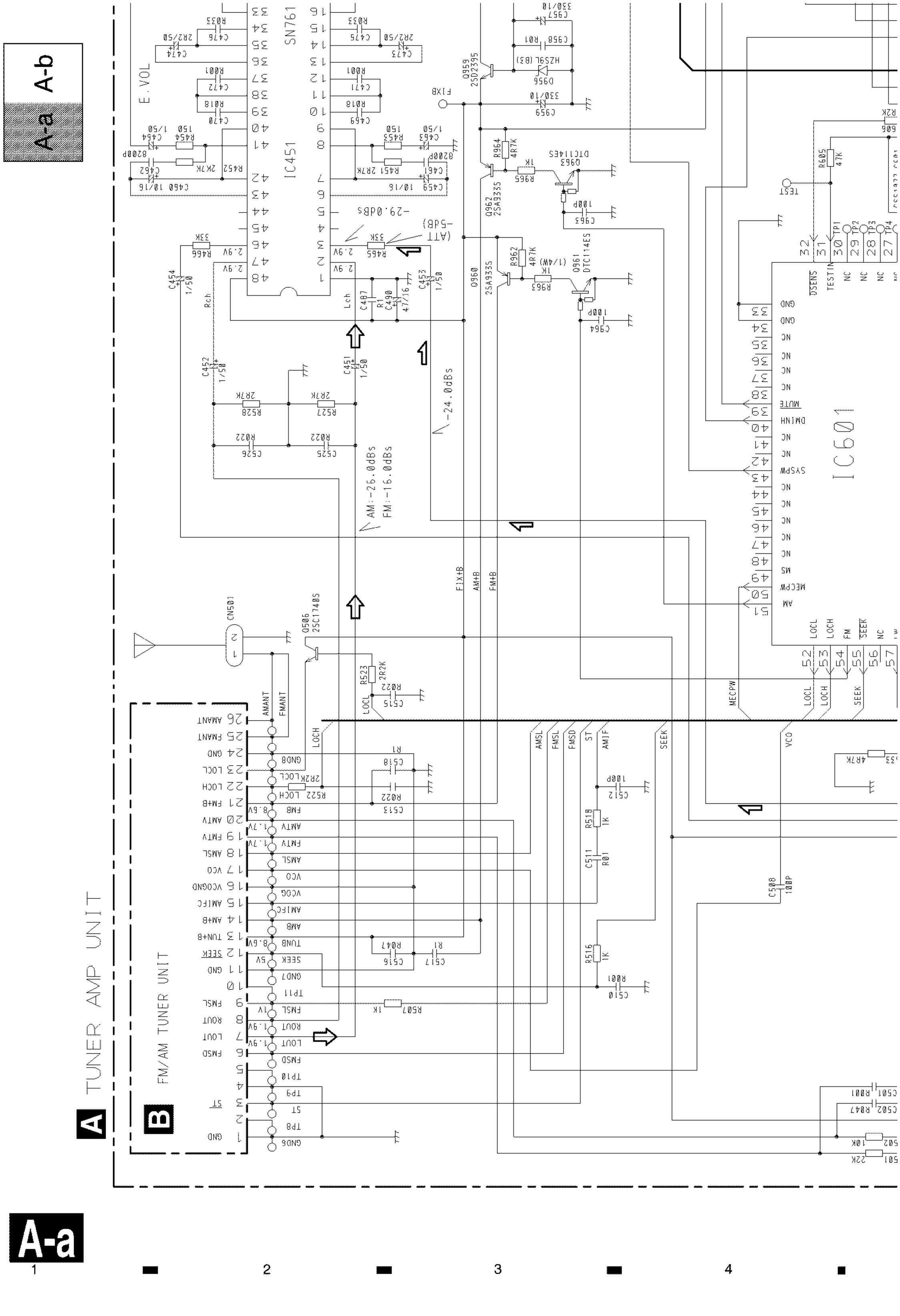
A-b

A-a



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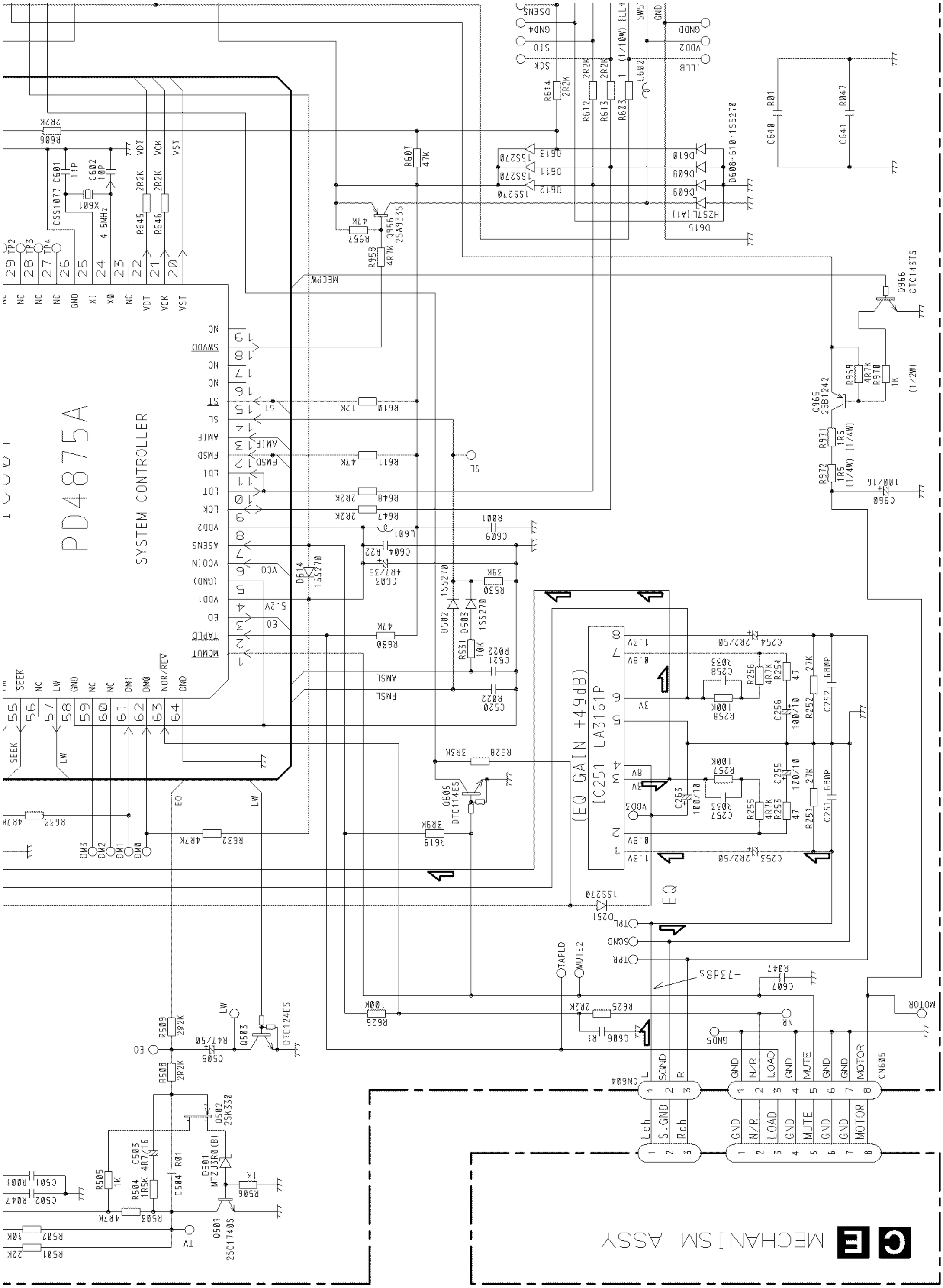

Fig. 5

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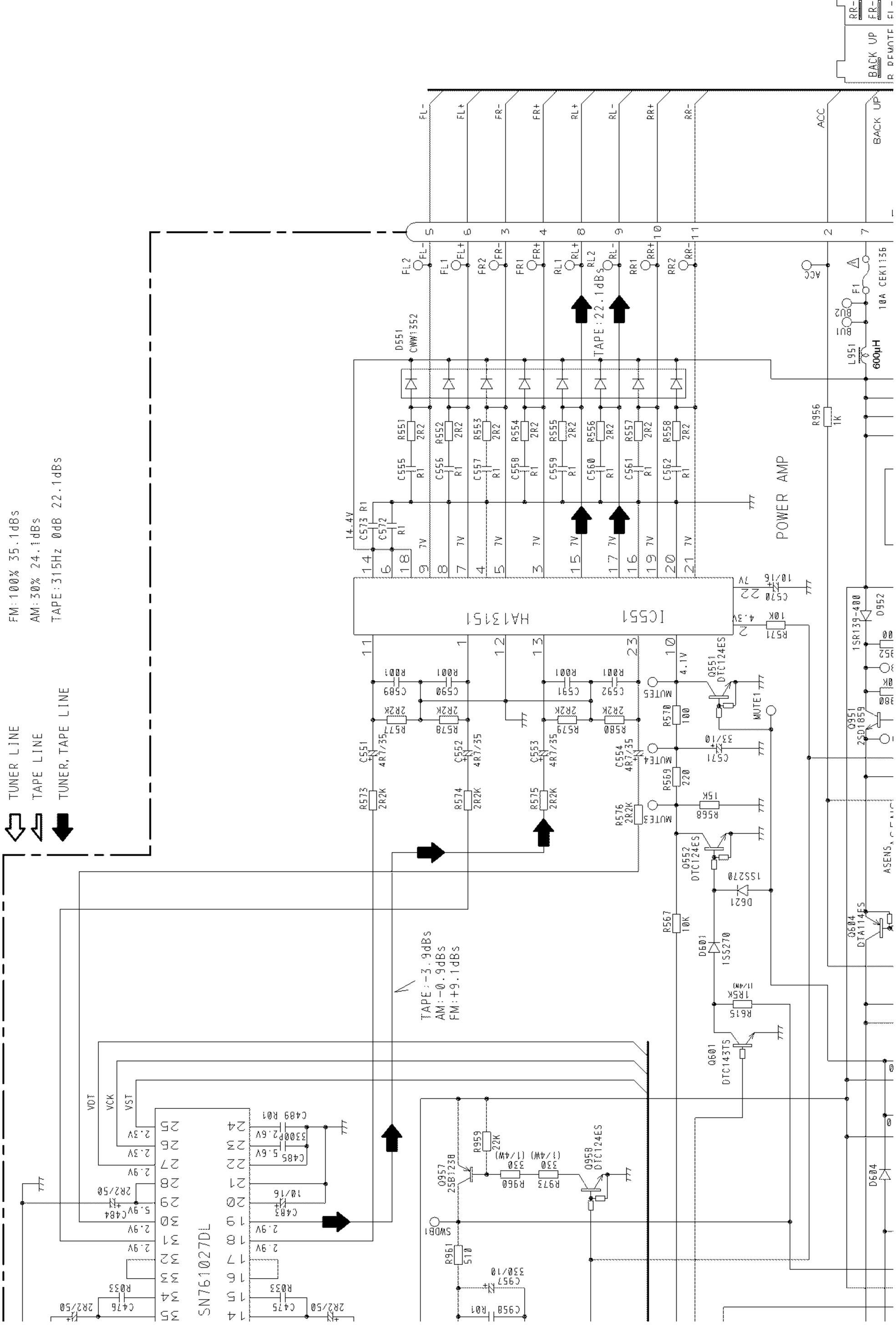
A-a A-b



TUNER LINE
TAPE LINE
TUNER, TAPE LINE

FM:100% 35.1dBs
AM:30% 24.1dBs
TAPE:315Hz 0dB 22.1dBs

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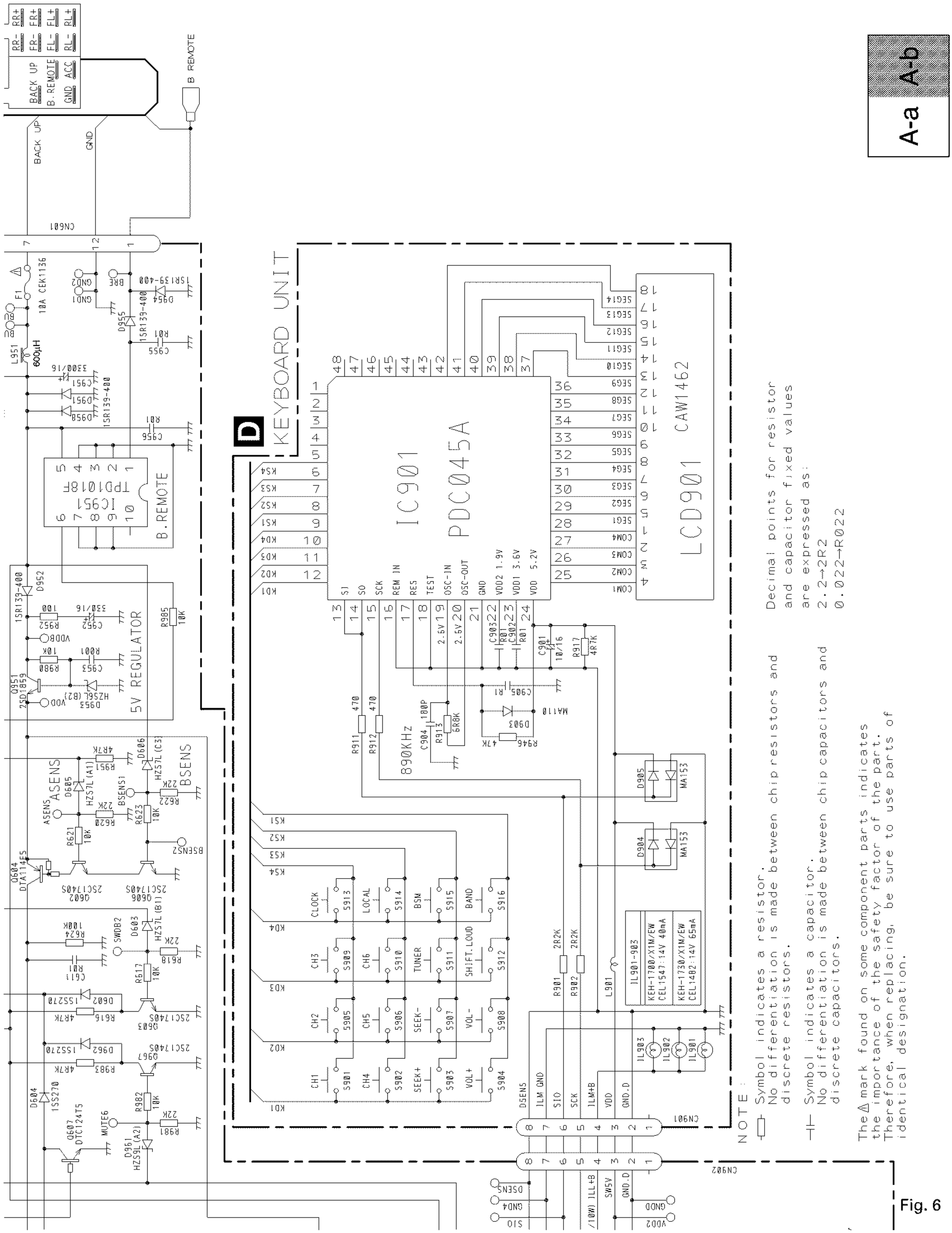
A-a A-b



NOTE:
- Symbol indicates a resistor. Decimal points for resistor and capacitor fixed values are expressed as:
  2.2→2R2
  0.022→R022
- Symbol indicates a capacitor.
- The △ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Fig. 6

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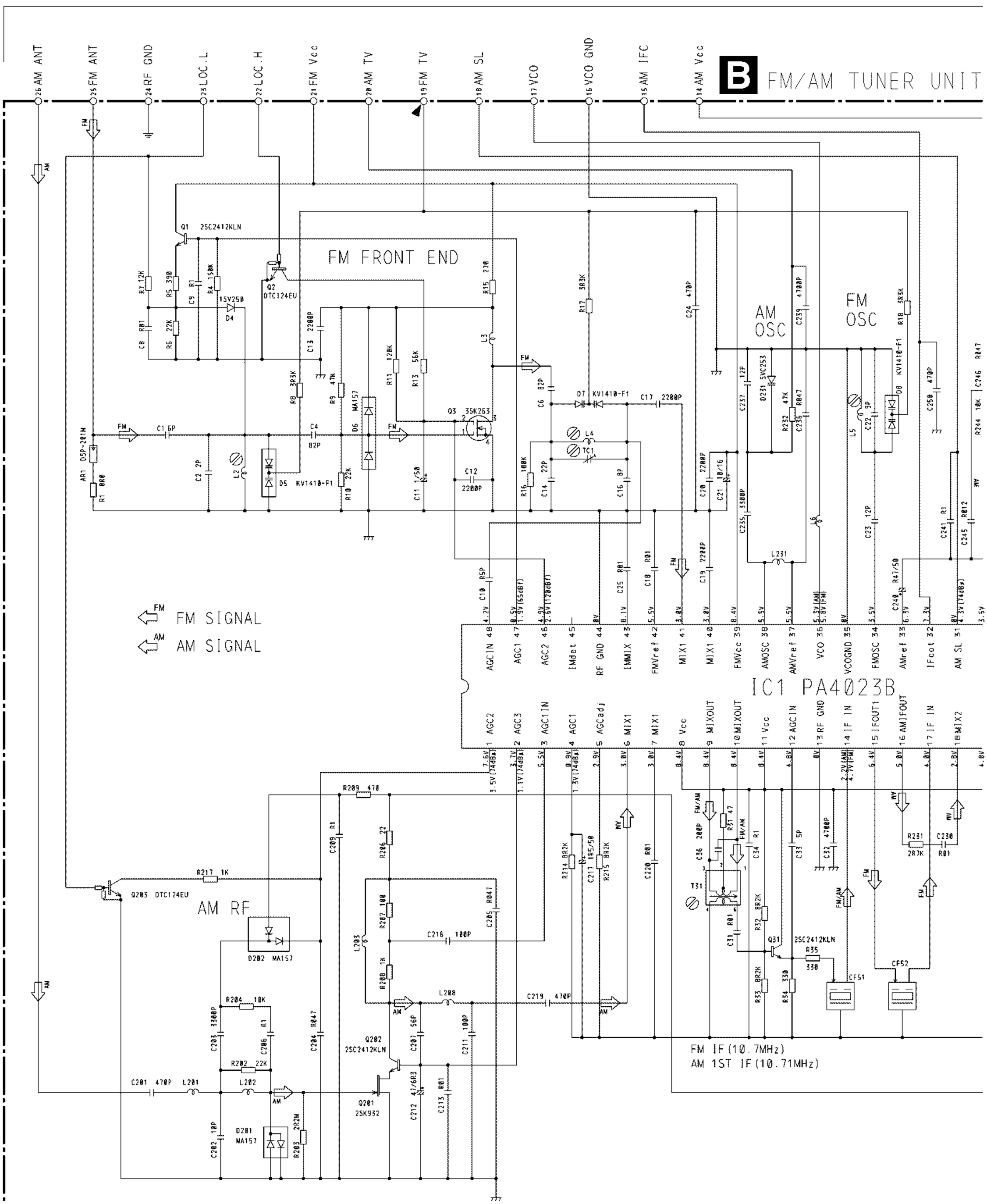
3.2 FM/AM TUNER UNIT

B FM/AM TUNER UNIT



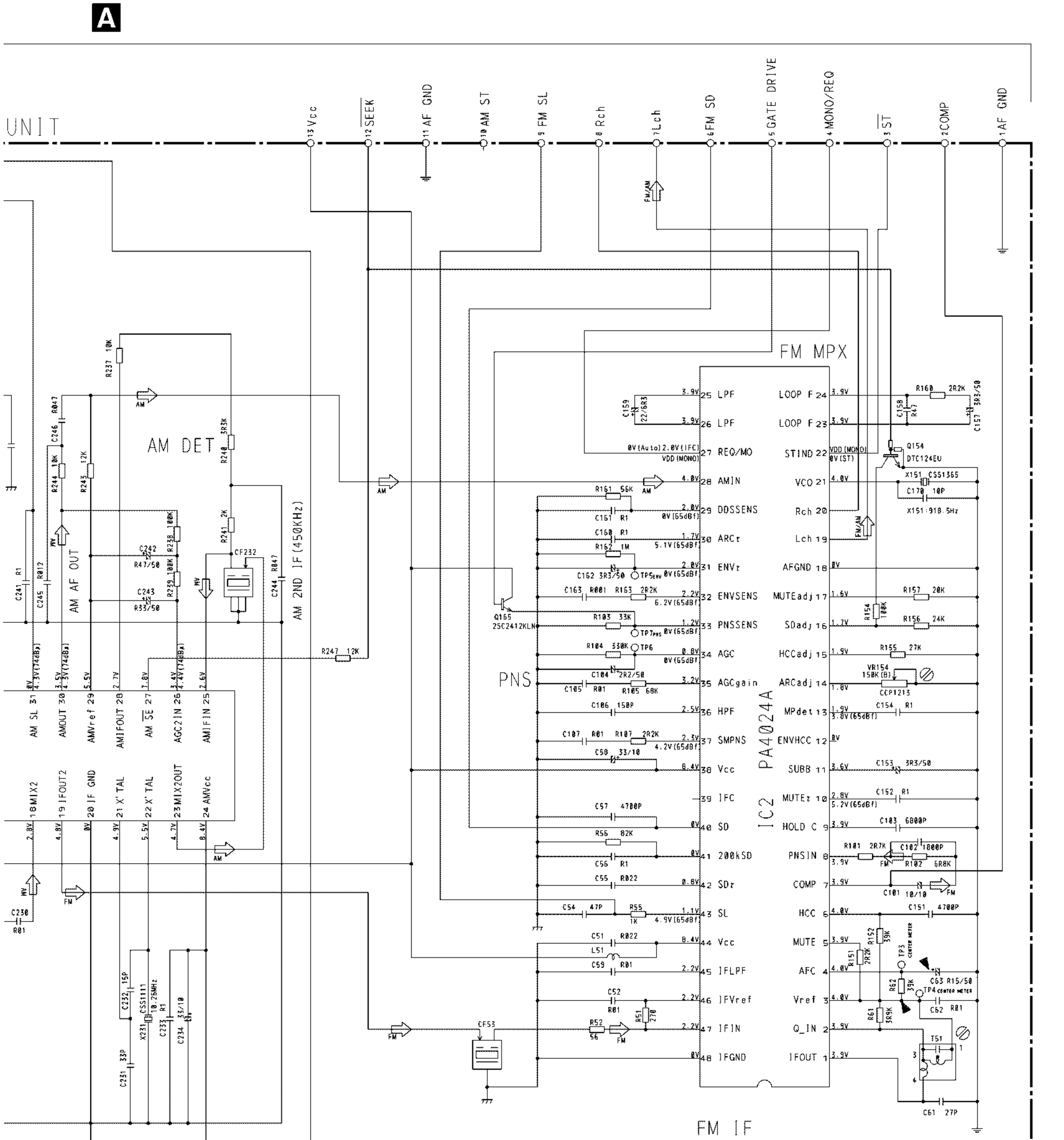
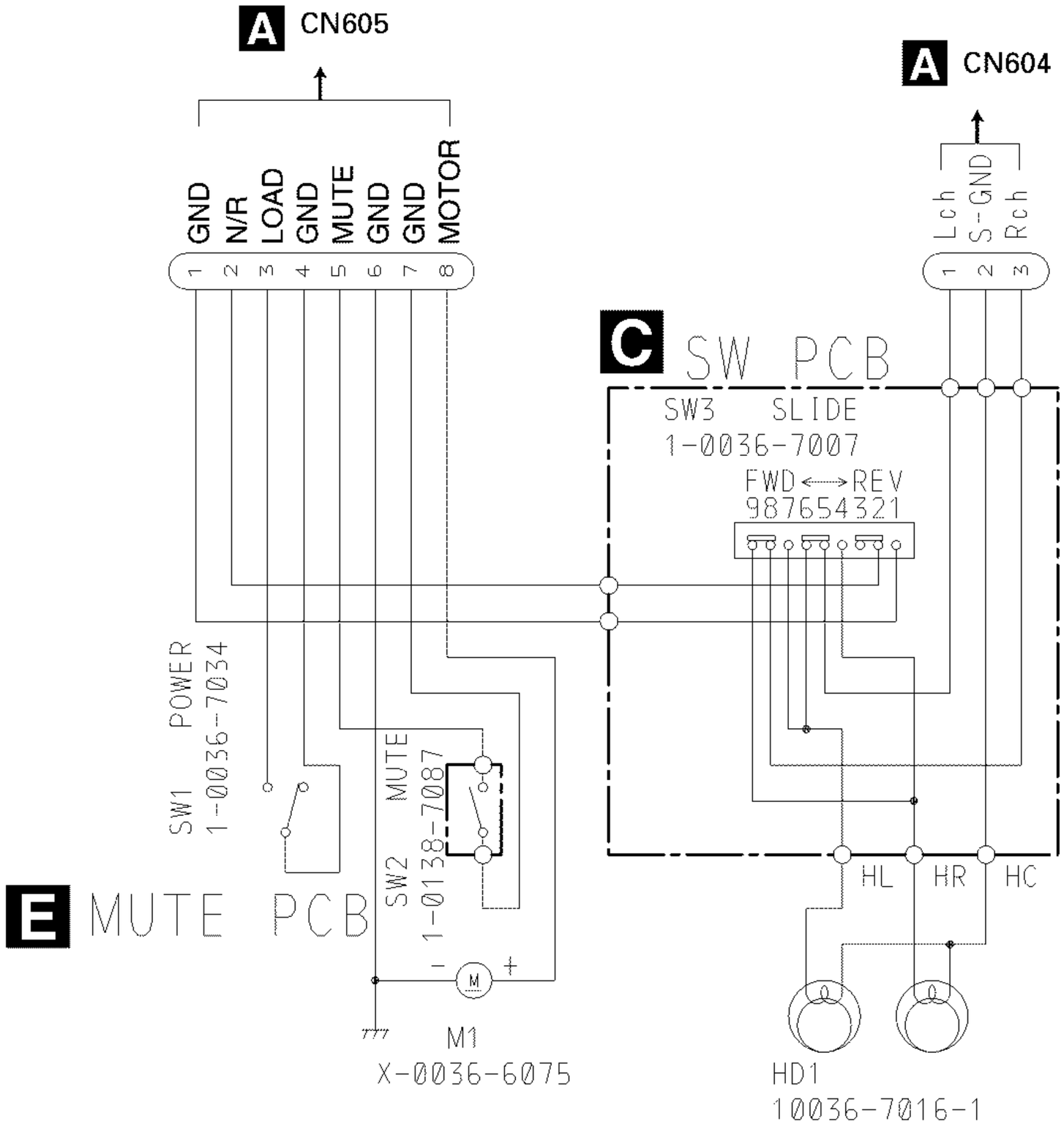

UNIT
AM DET
AM AF OUT
AM 2ND IF (450KHz)
FM MPX
PNS
IC2 PA4024A
FM IF
AM SL 31
AMOUT 30
AMVref 29
AMIFOUT 28
AM SE 27
AGC2IN 26
AMIFIN 25
18 MIX2
19 IFOUT2
20 IF GND
21 X'TAL
22 X'TAL
23 MIX2OUT
24 AMVcc
25 LPF
26 LPF
27 REQ/MO
28 AMIN
29 DOSSENS
30 ARCτ
31 ENVτ
32 ENVSENS
33 PNSSENS
34 AGC
35 AGCgain
36 HPF
37 SMPNS
38 Vcc
39 IFC
40 SD
41 200kSD
42 SDτ
43 SL
44 Vcc
45 IFLPF
46 IFVref
47 IFIN
48 IFGND
LOOP F 24
LOOP F 23
STIND 22
VCO 21
Rch 20
Lch 19
AFGND 18
MUTEadj 17
SDadj 16
HCCadj 15
ARCadj 14
MPdet 13
ENVHCC 12
SUBB 11
MUTEτ 10
HOLD C 9
PNSIN 8
COMP 7
HCC 6
MUTE 5
AFC 4
Vref 3
Q_IN 2
IFOUT 1
Q154 DTC124EU
X151 CSS1365
X151:918.5Hz
X231 CSS1117 10.25MHz
CF232
CF53
Q165 2SC2412KLN
T51
TP3 CENTER METER
TP4 CENTER METER
TP5ENV
TP6
TP7PNS
VR154 150K(B)
FM/AM
AM
FM
MW

Fig. 7

3.3 MECHANISM ASSY



SWITCHES:
MUTE PCB
SW2:MUTE SWITCH·····ON-OFF
MISCELLANEOUS
SW1:POWER SWITCH·····ON-OFF
The underlined indicates
the switch position.

Fig. 8

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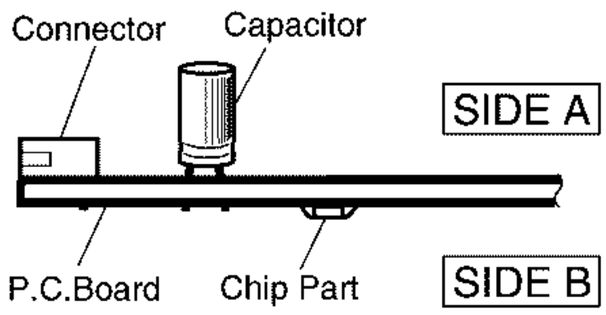
4. PCB CONNECTION DIAGRAM

4.1 MECHANISM ASSY

NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



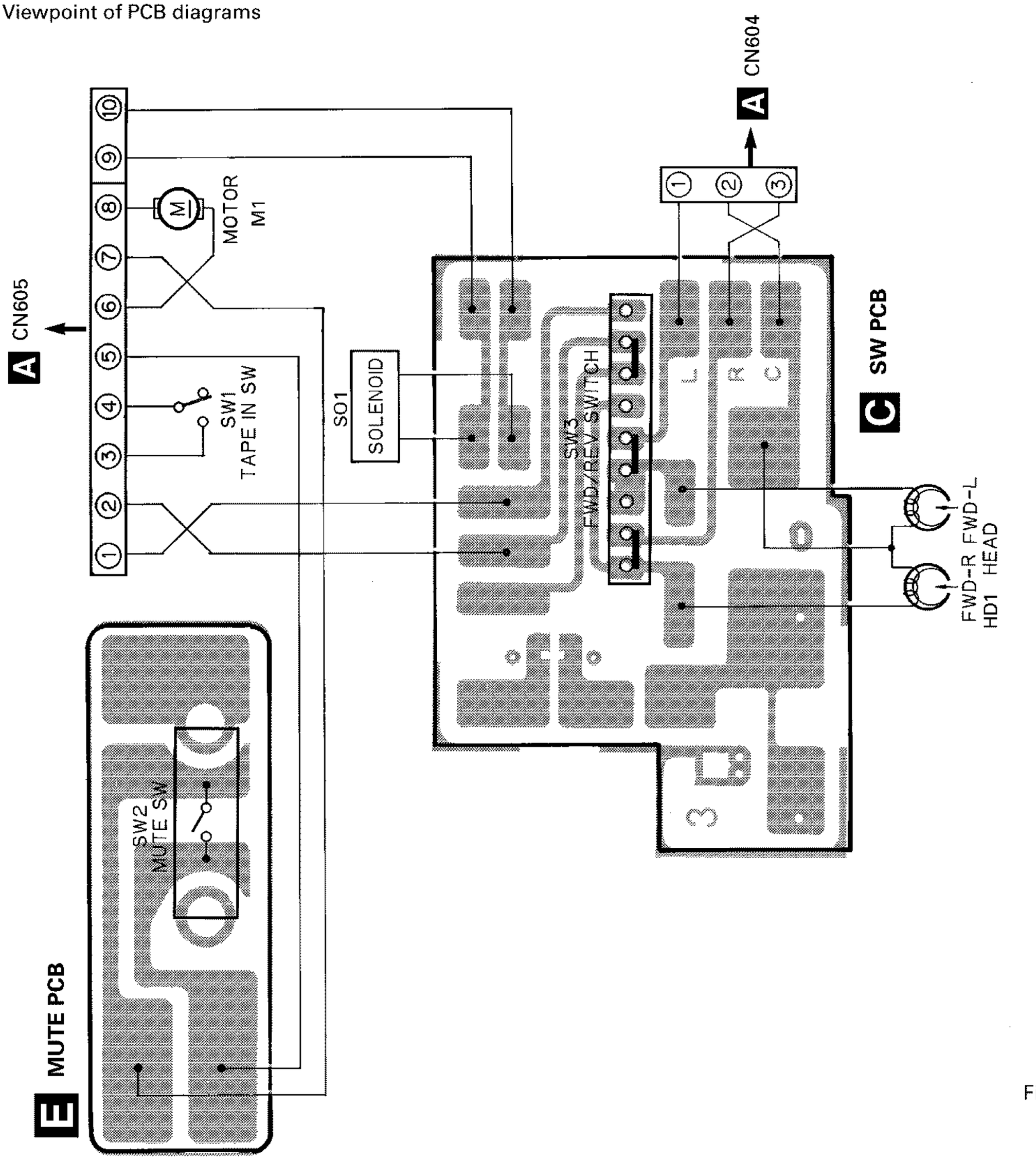


Fig. 9

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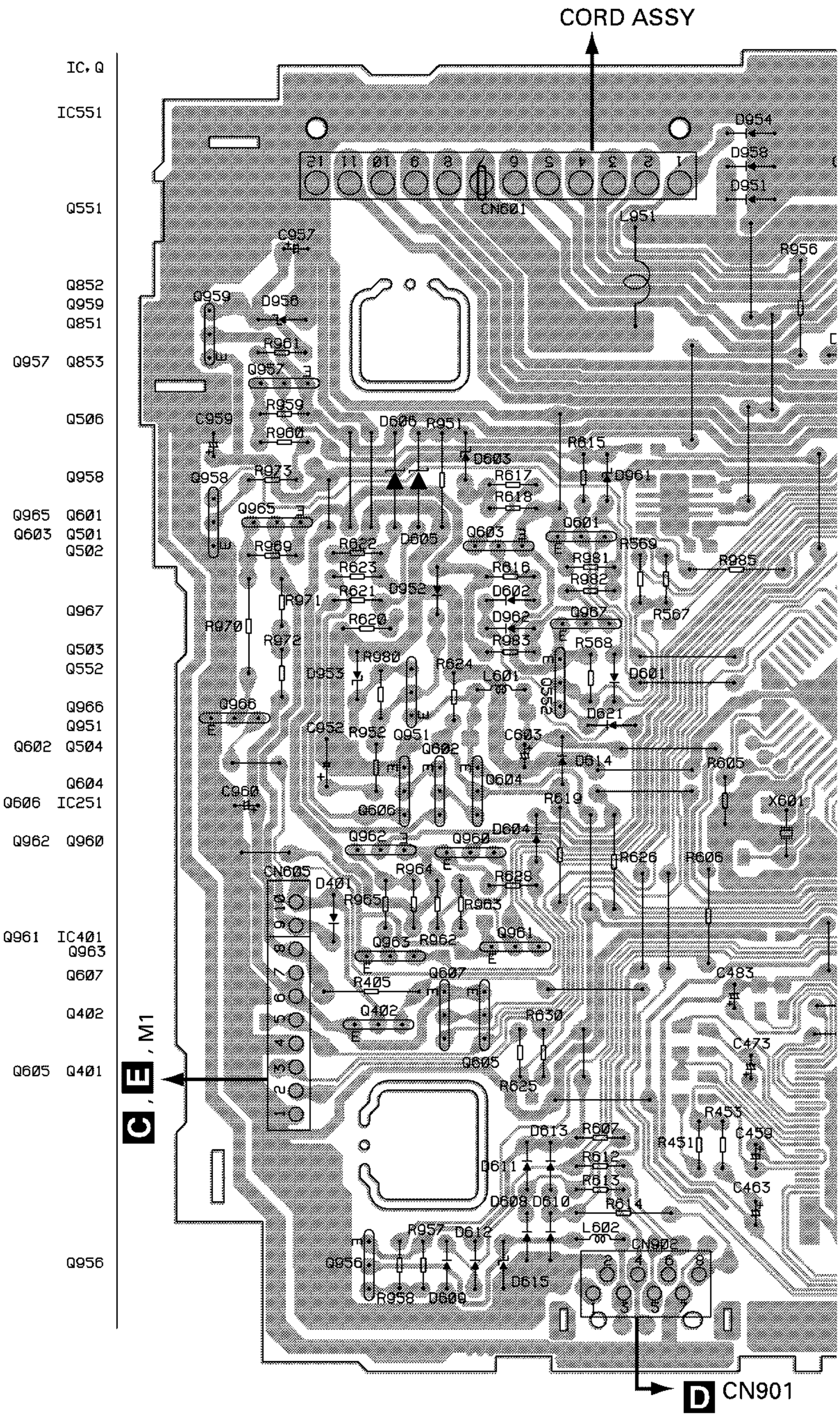
4.2 TUNER AMP UNIT

A TUNER AMP UNIT



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SIDE A

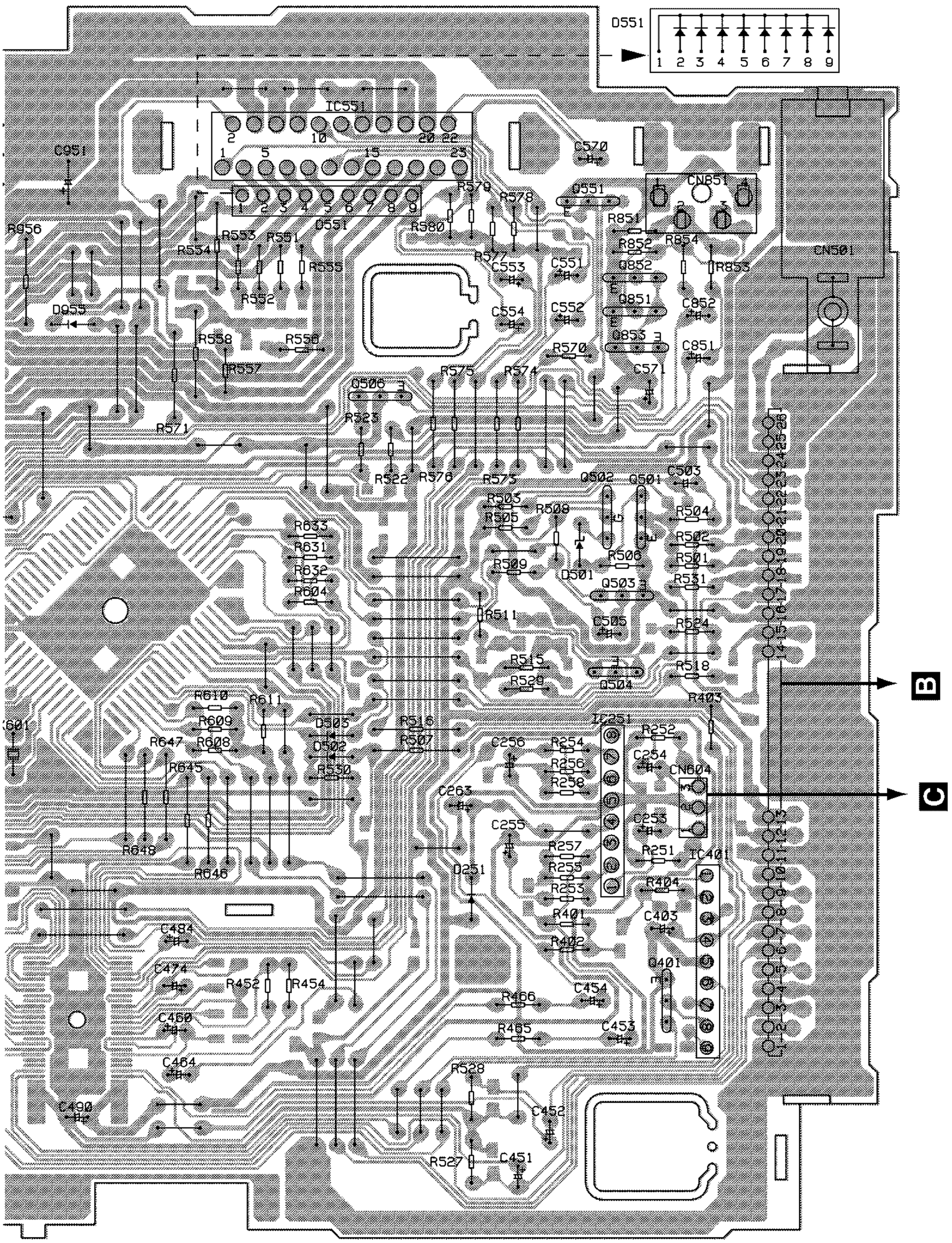

Fig. 10

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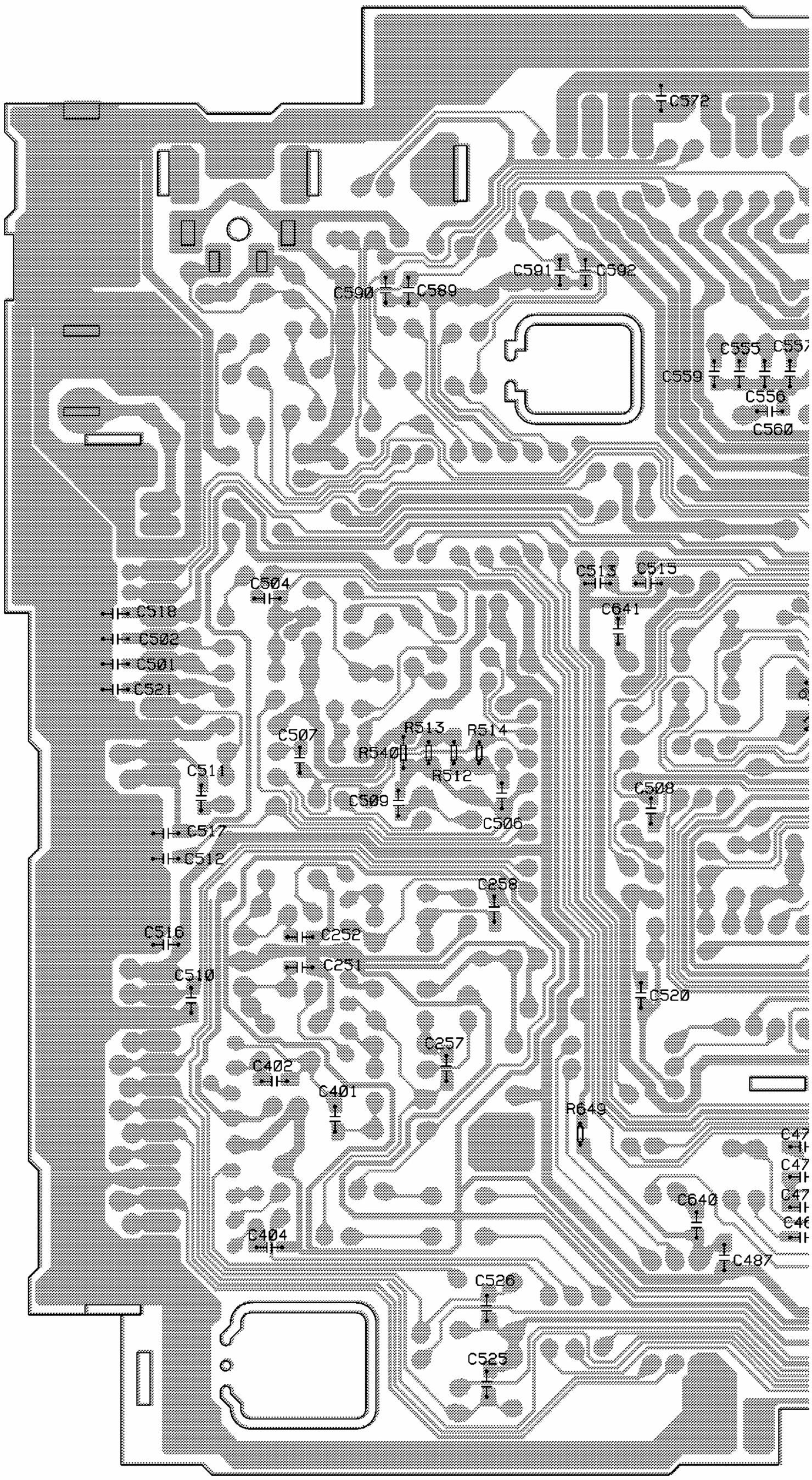
A TUNER AMP UNIT



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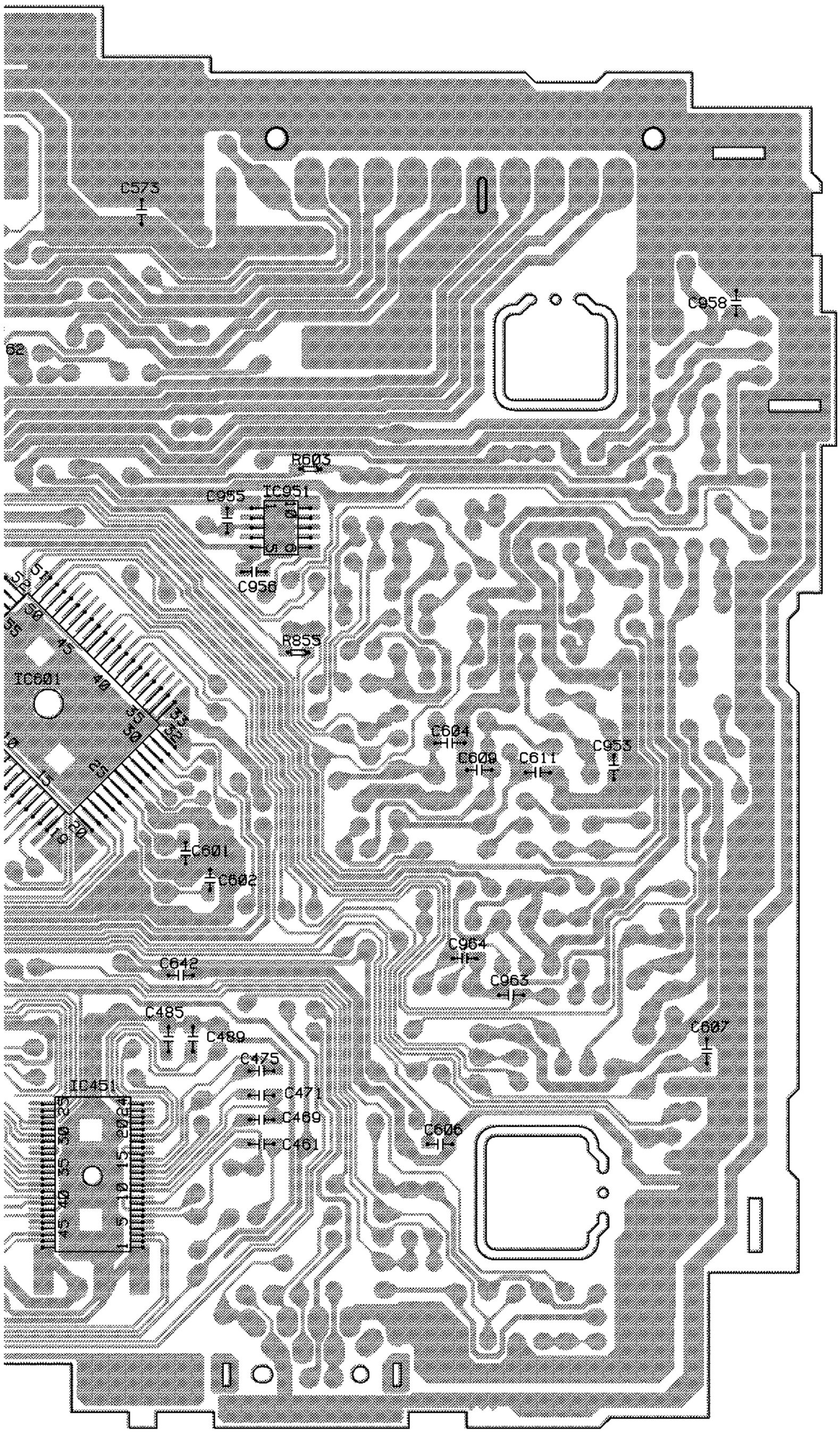
SIDE B



IC, Q

IC951

IC601

IC451

Fig. 11

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4.3 FM/AM TUNER UNIT

SIDE A

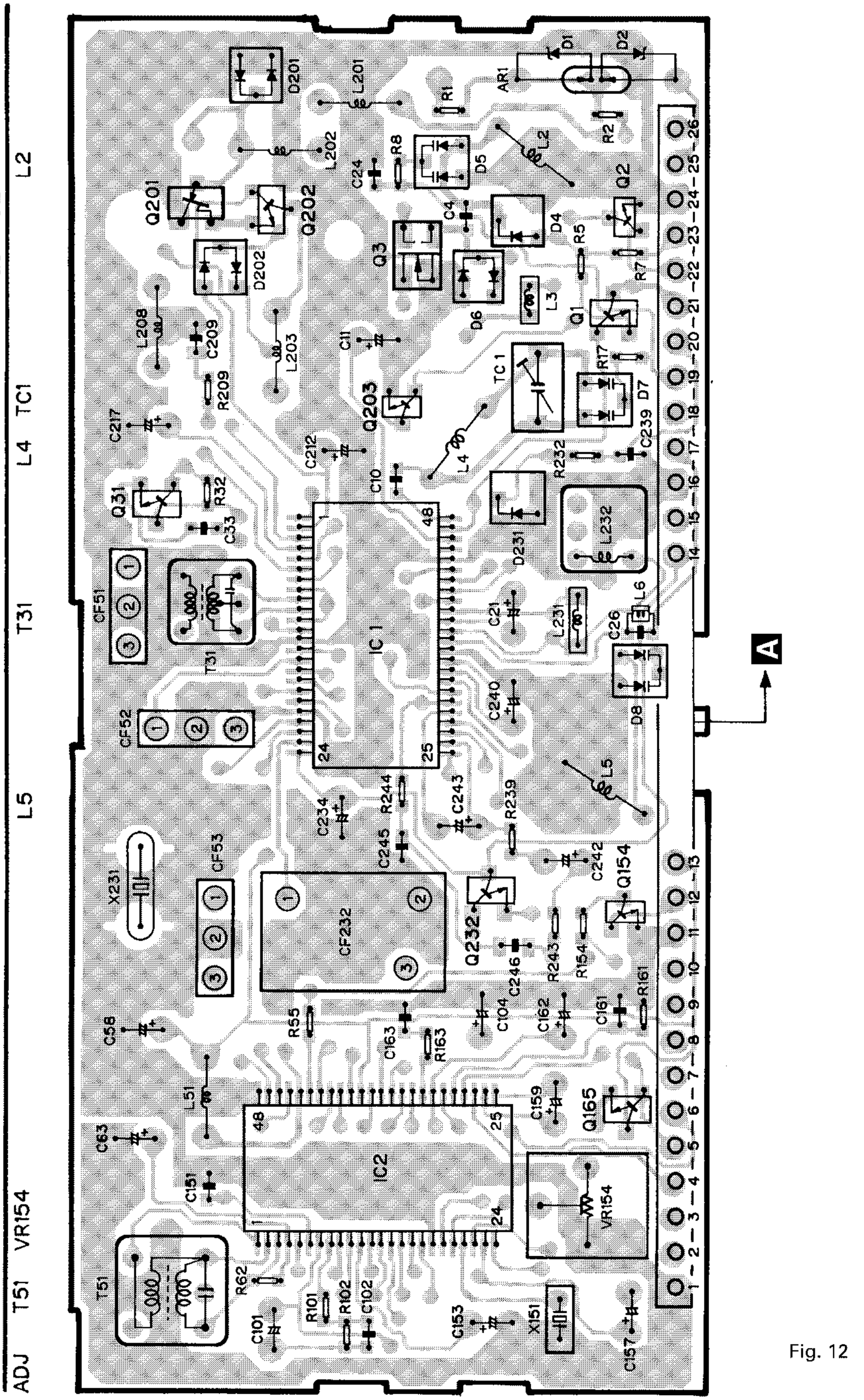

Fig. 12

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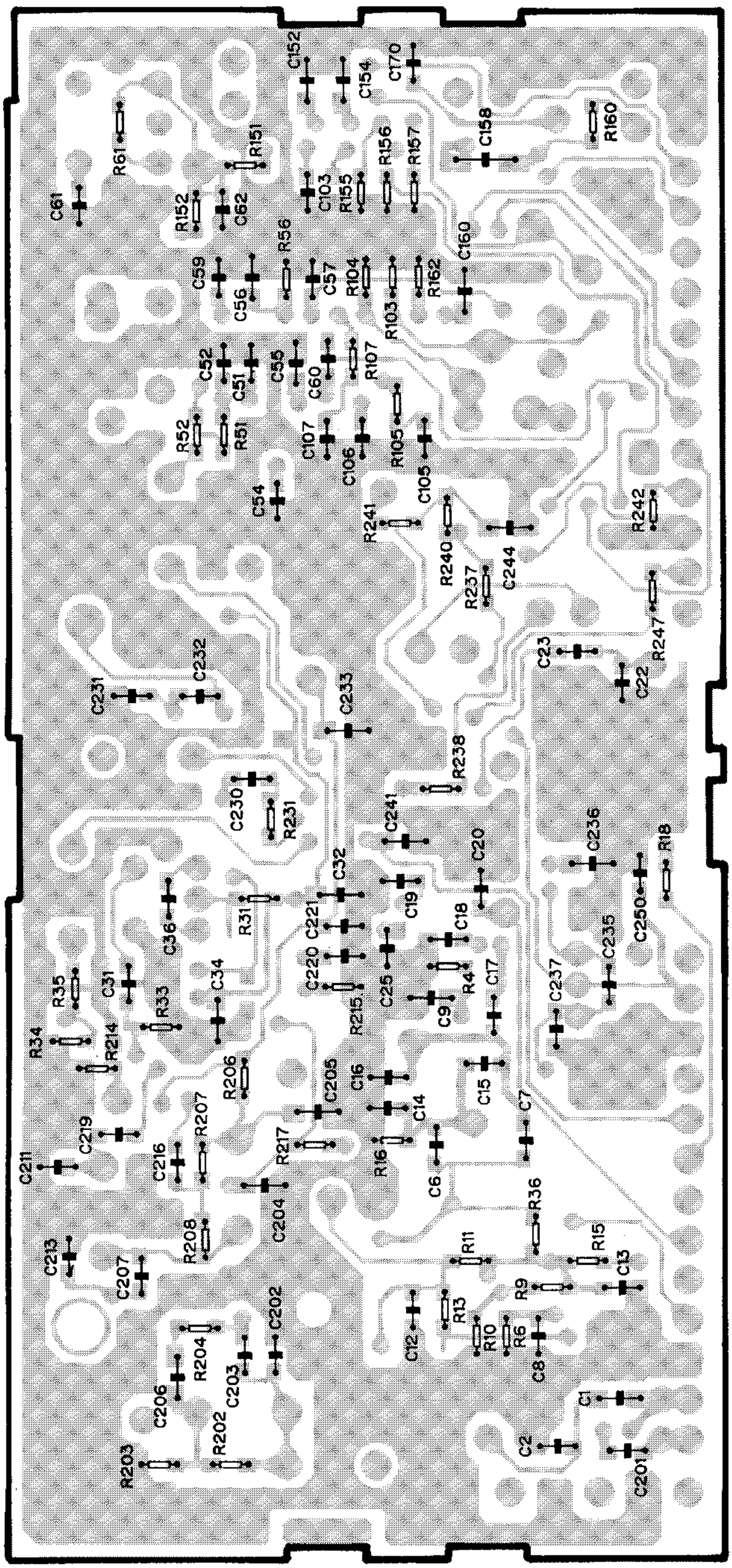
SIDE B



B FM/AM TUNER UNIT

Fig. 13

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4.4 KEYBOARD UNIT

SIDE A

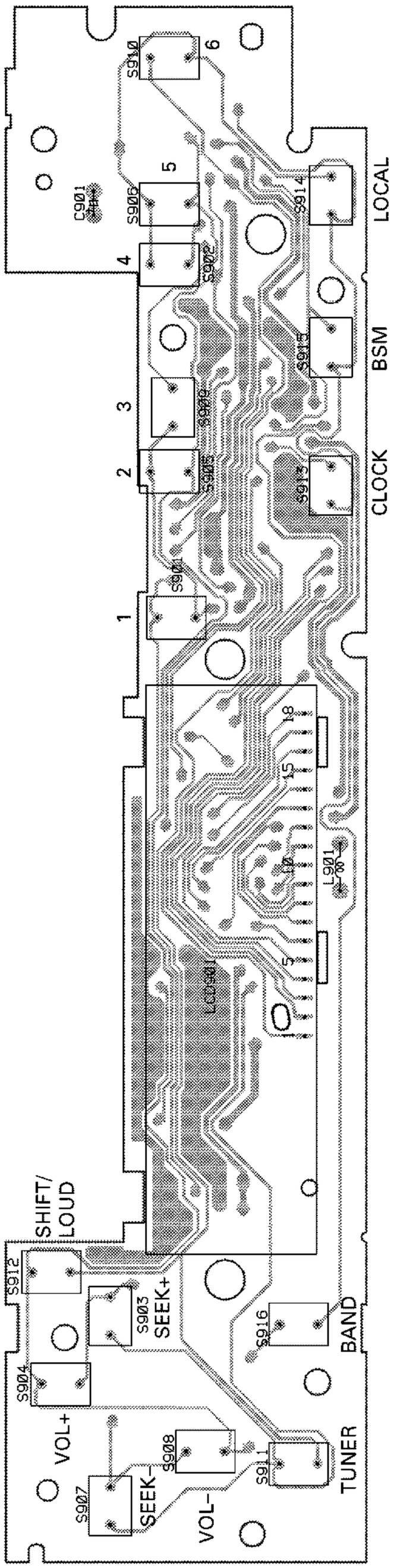

Fig. 14

SIDE B

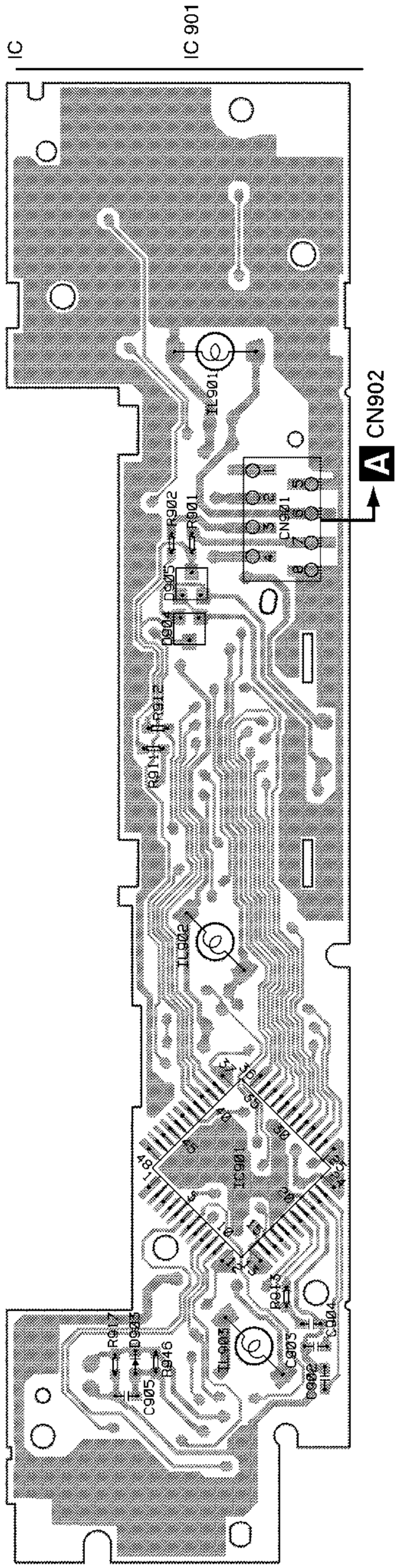

Fig. 15

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ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

  Chip Resistor

  RS1/○S○○○J,RS1/○○S○○○J

  Chip Capacitor (except for CQS.....)

  CKS....., CCS....., CSZS.....

A Unit Number : CWM5703
Unit Name : Tuner Amp Unit

MISCELLANEOUS

=====Circuit Symbol and No.		===Part Name	Part No.
IC	251	IC	LA3161P
IC	451	IC	SN761027DL
IC	551	IC	HA13151
IC	601	IC	PD4875A
IC	951	IC	TPD1018F
Q	501	Transistor	2SC1740S
Q	502	Transistor	2SK330
Q	503	Transistor	DTC124ES
Q	506	Transistor	2SC1740S
Q	551	Transistor	DTC124ES
Q	552	Transistor	DTC124ES
Q	601	Transistor	DTC143TS
Q	602	Transistor	2SC1740S
Q	603	Transistor	2SC1740S
Q	604	Transistor	DTA114ES
Q	605	Transistor	DTC114ES
Q	606	Transistor	2SC1740S
Q	607	Transistor	DTC124TS
Q	951	Transistor	2SD1859
Q	956	Transistor	2SA933S
Q	957	Transistor	2SB1238
Q	958	Transistor	DTC124ES
Q	959	Transistor	2SD2395
Q	960	Transistor	2SA933S
Q	961	Transistor	DTC114ES
Q	962	Transistor	2SA933S
Q	963	Transistor	DTC114ES
Q	965	Transistor	2SB1242
Q	966	Transistor	DTC143TS
Q	967	Transistor	2SC1740S
D	251	Diode	1SS270
D	501	Diode	MTZJ3R0(B)
D	502	Diode	1SS270
D	503	Diode	1SS270
D	551	Diode	CWW1352
D	601	Diode	1SS270
D	602	Diode	1SS270
D	603	Diode	HZS7L(B1)
D	604	Diode	1SS270
D	605	Diode	HZS7L(A1)
D	606	Diode	HZS7L(C3)
D	608	Diode	1SS270
D	609	Diode	1SS270
D	610	Diode	1SS270
D	611	Diode	1SS270
D	612	Diode	1SS270
D	613	Diode	1SS270
D	614	Diode	1SS270
D	615	Diode	HZS7L(A1)
D	621	Diode	1SS270

=====Circuit Symbol and No.		===Part Name	Part No.
D	951	Diode	1SR139-400
D	952	Diode	1SR139-400
D	953	Diode	HZS6L(B2)
D	954	Diode	1SR139-400
D	955	Diode	1SR139-400
D	956	Diode	HZS9L(B3)
D	958	Diode	1SR139-400
D	961	Diode	HZS9L(A2)
D	962	Diode	1SS270
L	601	Ferri-Inductor	LAU2R2K
L	602	Ferri-Inductor	LAU2R2K
L	951	Choke Coil 600µH	CTH1168
X	601	Crystal Resonator 4.500MHz	CSS1077
		FM/AM Tuner Unit	CWE1466

RESISTORS

R	251		RD1/4PU273J
R	252		RD1/4PU273J
R	253		RD1/4PU470J
R	254		RD1/4PU470J
R	255		RD1/4PU472J
R	256		RD1/4PU472J
R	257		RD1/4PU104J
R	258		RD1/4PU104J
R	451		RD1/4PU272J
R	452		RD1/4PU272J
R	453		RD1/4PU151J
R	454		RD1/4PU151J
R	465		RD1/4PU333J
R	466		RD1/4PU333J
R	501		RD1/4PU223J
R	502		RD1/4PU103J
R	503		RD1/4PU472J
R	504		RD1/4PU152J
R	505		RD1/4PU102J
R	506		RD1/4PU102J
R	507		RD1/4PU102J
R	508		RD1/4PU222J
R	509		RD1/4PU222J
R	516		RD1/4PU102J
R	518		RD1/4PU102J
R	522		RD1/4PU222J
R	523		RD1/4PU222J
R	527		RD1/4PU272J
R	528		RD1/4PU272J
R	530		RD1/4PU393J
R	531		RD1/4PU103J
R	551		RD1/4PU2R2J
R	552		RD1/4PU2R2J
R	553		RD1/4PU2R2J
R	554		RD1/4PU2R2J
R	555		RD1/4PU2R2J
R	556		RD1/4PU2R2J
R	557		RD1/4PU2R2J
R	558		RD1/4PU2R2J
R	567		RD1/4PU103J

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Circuit Symbol and No.		Part Name	Part No.
R	568		RD1/4PU153J
R	569		RD1/4PU221J
R	570		RD1/4PU101J
R	571		RD1/4PU103J
R	573		RD1/4PU222J
R	574		RD1/4PU222J
R	575		RD1/4PU222J
R	576		RD1/4PU222J
R	577		RD1/4PU222J
R	578		RD1/4PU222J
R	579		RD1/4PU222J
R	580		RD1/4PU222J
R	603		RS1/10S1R0J
R	605		RD1/4PU473J
R	606		RD1/4PU222J
R	607		RD1/4PU473J
R	610		RD1/4PU123J
R	611		RD1/4PU473J
R	612		RD1/4PU222J
R	613		RD1/4PU222J
R	614		RD1/4PU222J
R	615		RD1/4PU152J
R	616		RD1/4PU472J
R	617		RD1/4PU103J
R	618		RD1/4PU223J
R	619		RD1/4PU392J
R	620		RD1/4PU223J
R	621		RD1/4PU103J
R	622		RD1/4PU223J
R	623		RD1/4PU103J
R	624		RD1/4PU104J
R	625		RD1/4PU222J
R	626		RD1/4PU104J
R	628		RD1/4PU332J
R	630		RD1/4PU473J
R	632		RD1/4PU472J
R	633		RD1/4PU472J
R	645		RD1/4PU222J
R	646		RD1/4PU222J
R	647		RD1/4PU222J
R	648		RD1/4PU222J
R	951		RD1/4PU472J
R	952		RD1/4PU101J
R	956		RD1/4PU102J
R	957		RD1/4PU473J
R	958		RD1/4PU472J
R	959		RD1/4PU223J
R	960		RD1/4PU331J
R	961		RD1/4PU511J
R	962		RD1/4PU472J
R	963		RD1/4PU102J
R	964		RD1/4PU472J
R	965		RD1/4PU102J
R	969		RD1/4PU472J
R	970		RD1/4PU102J
R	971		RD1/4PU1R5J
R	972		RD1/4PU1R5J
R	973		RD1/4PU331J
R	980		RD1/4PU103J
R	981		RD1/4PU223J
R	982		RD1/4PU103J
R	983		RD1/4PU472J
R	985		RD1/4PU103J

CAPACITORS

Circuit Symbol and No.		Part Name	Part No.
C	251		CKSQYB681K50
C	252		CKSQYB681K50
C	253		CEJA2R2M50
C	254		CEJA2R2M50
C	255		CEAL101M10
C	256		CEAL101M10
C	257		CKSQYB333K25
C	258		CKSQYB333K25
C	263		CEAL101M10
C	451		CEAL1R0M50
C	452		CEAL1R0M50
C	453		CEAL1R0M50
C	454		CEAL1R0M50
C	459		CEAL100M16
C	460		CEAL100M16
C	461		CKSQYB822K50
C	462		CKSQYB822K50
C	463		CEAL1R0M50
C	464		CEAL1R0M50
C	469		CKSQYB183K25
C	470		CKSQYB183K25
C	471		CKSQYB102K50
C	472		CKSQYB102K50
C	473		CEAL2R2M50
C	474		CEAL2R2M50
C	475		CKSQYB333K25
C	476		CKSQYB333K25
C	483		CEAL100M16
C	484		CEAL2R2M50
C	485		CKSQYB332K50
C	487		CKSQYB104K16
C	489		CKSQYB103K25
C	490		CEAL470M16
C	501		CKSQYB102K50
C	502		CKSQYB473K16
C	503	4.7µF/16V	CCH1250
C	504		CKSQYB103K25
C	505		CEJAR47M50
C	508		CCSQCH101J50
C	510		CKSQYB102K50
C	511		CKSQYB103K25
C	512		CCSQCH101J50
C	513		CKSQYB223K25
C	515		CKSQYB223K25
C	516		CKSQYB473K16
C	517		CKSQYB104K16
C	518		CKSQYB104K16
C	520		CKSQYB223K25
C	521		CKSQYB223K25
C	525		CKSQYB223K25
C	526		CKSQYB223K25
C	551		CEJA4R7M35
C	552		CEJA4R7M35
C	553		CEJA4R7M35
C	554		CEJA4R7M35
C	555		CKSQYB104K16
C	556		CKSQYB104K16
C	557		CKSQYB104K16
C	558		CKSQYB104K16
C	559		CKSQYB104K16
C	560		CKSQYB104K16
C	561		CKSQYB104K16
C	562		CKSQYB104K16
C	570		CEAS100M16
C	571		CEAS330M10

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=====Circuit Symbol and No.	===	Part Name	Part No.
C	572		CKSQYB104K25
C	573		CKSQYB104K25
C	589		CKSQYB102K50
C	590		CKSQYB102K50
C	591		CKSQYB102K50
C	592		CKSQYB102K50
C	601		CCSQCH110J50
C	602		CCSQCH100D50
C	603		CEJA4R7M35
C	604		CKSYB224K16
C	606		CKSQYB104K16
C	607		CKSQYB473K16
C	609		CKSQYB102K50
C	611		CKSQYB103K25
C	640		CKSQYB103K25
C	641		CKSQYB473K16
C	951	3300µF/16V	CCH1018
C	952		CEAS331M16
C	953		CKSQYB102K50
C	955		CKSQYB103K50
C	956		CKSQYB103K50
C	957	330µF/10V	CCH1181
C	958		CKSQYB103K25
C	959	330µF/10V	CCH1181
C	960		CEAS101M16
C	963		CCSQCH101J50
C	964		CCSQCH101J50

D Unit Number : CWM5710(KEH-1700/X1M/EW)
: CWM5711(KEH-1730/X1M/EW)
Unit Name : Keyboard Unit

MISCELLANEOUS

D	903	Diode	MA110
D	904	Diode	MA153
D	905	Diode	MA153
IC	901	IC	PDC045A
L	901	Inductor	LAU150K
IL	901	Lamp 14V 40mA(KEH-1700/X1M/EW)	CEL1547
IL	901	Lamp 14V 65mA(KEH-1730/X1M/EW)	CEL1482
IL	902	Lamp 14V 40mA(KEH-1700/X1M/EW)	CEL1547
IL	902	Lamp 14V 65mA(KEH-1730/X1M/EW)	CEL1482
IL	903	Lamp 14V 40mA(KEH-1700/X1M/EW)	CEL1547
IL	903	Lamp 14V 65mA(KEH-1730/X1M/EW)	CEL1482
LCD	901	LCD	CAW1462

RESISTORS

R	901		RS1/10S222J
R	902		RS1/10S222J
R	911		RS1/10S471J
R	912		RS1/10S471J
R	913		RS1/10S682J
R	917		RS1/10S472J
R	946		RS1/10S473J

CAPACITORS

C	901		CEAL100M16
C	902		CKSQYB103K25
C	903		CKSQYB103K25
C	904		CCSQCH181J50
C	905		CKSQYB104K16

=====Circuit Symbol and No.	===	Part Name	Part No.

B Unit Number : CWE1466
Unit Name : FM/AM Tuner Unit

MISCELLANEOUS

IC	1	IC	PA4023B
IC	2	IC	PA4024A
Q	1	Transistor	2SC2412KLN
Q	2	Transistor	DTC124EU
Q	3	FET	3SK263
Q	31	Transistor	2SC2412KLN
Q	154	Transistor	DTC124EU
Q	165	Transistor	2SC2412KLN
Q	201	FET	2SK932
Q	202	Transistor	2SC2412KLN
Q	203	Transistor	DTC124EU
D	4	Diode	1SV250
D	5	Diode	KV1410-F1
D	6	Diode	MA157
D	7	Diode	KV1410-F1
D	8	Diode	KV1410-F1
D	201	Diode	MA157
D	202	Diode	MA157
D	231	Diode	SVC253
L	2	Coil	CTC1133
L	3	Inductor	LCTB2R2K2125
L	4	Coil	CTC1133
L	5	Coil	CTC1132
L	6	Inductor	LCTBR15K1608
L	51	Ferri-Inductor	LAU150K
L	201	Ferri-Inductor	LAU4R7K
L	202	Ferri-Inductor	LAU330K
L	203	Inductor	CTF1287
L	208	Inductor	LAU121K
L	231	Inductor	LCTA3R3J3225
T	31	Coil	CTE1116
T	51	Coil	CTC1136
TC	1	Capacitor	CCL1038
CF	51	Ceramic Filter	CTF1292
CF	52	Ceramic Filter	CTF1292
CF	53	Ceramic Filter	CTF1292
CF	232	Ceramic Filter	CTF1348
X	151	Resonator 920.5kHz	CSS1365
X	231	Crystal Resonator 10.26MHz	CSS1111
VR	154	Semi-fixed 150kΩ(B)	CCP1213
AR	1	Capacitor with Discharge Gap	DSP-201M

RESISTORS

R	1		RS1/16S0R0J
R	4		RS1/16S154J
R	5		RS1/16S391J
R	6		RS1/16S223J
R	7		RS1/16S123J
R	8		RS1/16S332J
R	9		RS1/16S473J
R	10		RS1/16S223J
R	11		RS1/16S124J
R	13		RS1/16S563J
R	15		RS1/16S271J
R	16		RS1/16S104J
R	17		RS1/16S332J
R	18		RS1/16S332J
R	31		RS1/16S470J
R	32		RS1/16S822J
R	33		RS1/16S822J
R	34		RS1/16S331J
R	35		RS1/16S331J
R	51		RS1/16S271J

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=====Circuit Symbol and No.	===Part Name	Part No.
R	52	RS1/16S560J
R	55	RS1/16S102J
R	56	RS1/16S823J
R	61	RS1/16S392J
R	62	RS1/16S393J
R	101	RS1/16S272J
R	102	RS1/16S682J
R	103	RS1/16S333J
R	104	RS1/16S334J
R	105	RS1/16S683J
R	107	RS1/16S222J
R	151	RS1/16S222J
R	152	RS1/16S393J
R	154	RS1/16S104J
R	155	RS1/16S273J
R	156	RS1/16S243J
R	157	RS1/16S203J
R	160	RS1/16S222J
R	161	RS1/16S563J
R	162	RS1/16S105J
R	163	RS1/16S222J
R	202	RS1/16S223J
R	203	RS1/16S225J
R	204	RS1/16S103J
R	206	RS1/16S220J
R	207	RS1/16S101J
R	208	RS1/16S102J
R	209	RS1/16S471J
R	214	RS1/16S822J
R	215	RS1/16S822J
R	217	RS1/16S102J
R	231	RS1/16S272J
R	232	RS1/16S473J
R	237	RS1/16S103J
R	238	RS1/16S104J
R	239	RS1/16S104J
R	240	RS1/16S332J
R	241	RS1/16S202J
R	243	RS1/16S123J
R	244	RS1/16S103J
R	247	RS1/16S123J
CAPACITORS		
C	1	CCSQCH6R0D50
C	2	CCSRCK2R0C50
C	4	CCSRCH820J50
C	6	CCSRCH820J50
C	8	CKSRYB103K25
C	9	CKSQYB104K16
C	10	CCSRCKR50C50
C	11	CEJA1R0M50
C	12	CKSRYB222K50
C	13	CKSRYB222K50
C	14	CCSRCH220J50
C	16	CCSRCH8R0D50
C	17	CKSRYB222K50
C	18	CKSRYB103K25
C	19	CKSRYB222K50
C	20	CKSRYB222K50
C	21	CEJA100M16
C	22	CCSRTH9R0D50
C	23	CCSRTH120J50
C	24	CCSRCH471J50
C	25	CKSRYB103K25
C	31	CKSRYB103K25
C	32	CKSQYB472K50
C	33	CCSRCH5R0C50
C	34	CKSQYB104K16

=====Circuit Symbol and No.	===Part Name	Part No.
C	36	CCSRRH201J50
C	51	CKSRYB223K25
C	52	CKSRYB103K25
C	54	CCSRCH470J50
C	55	CKSQYB223K25
C	56	CKSQYB104K16
C	57	CKSRYB472K50
C	58	CEJA330M10
C	59	CKSRYB103K25
C	61	CCSRCH270J50
C	62	CKSRYB103K25
C	63	CEJAR15M50
C	101	CEJANP100M10
C	102	CKSRYB182K50
C	103	CKSRYB682K25
C	104	CEJA2R2M50
C	105	CKSRYB103K25
C	106	CCSRCH151J50
C	107	CKSRYB103K25
C	151	CKSRYB472K50
C	152	CKSQYB104K16
C	153	CEJA3R3M50
C	154	CKSQYB104K16
C	157	CEJA3R3M50
C	158	CKSYB474K16
C	159	CEJA220M6R3
C	160	CKSQYB104K16
C	161	CKSQYB104K16
C	162	CEJA3R3M50
C	163	CKSRYB102K50
C	170	CCSRCH100D50
C	201	CCSRCH471J50
C	202	CCSRCH100D50
C	203	CKSRYB332K50
C	204	CKSQYB473K16
C	205	CKSQYB473K16
C	206	CKSQYB104K16
C	207	CCSRCH560J50
C	209	CKSQYB104K16
C	211	CCSRCH101J50
C	212	CEJA470M6R3
C	213	CKSRYB103K25
C	216	CCSRCH101J50
C	217	CEJA1R5M50
C	219	CCSRCH471J50
C	220	CKSRYB103K25
C	230	CKSRYB103K25
C	231	CCSRCH330J50
C	232	CCSRCH150J50
C	233	CKSQYB104K16
C	234	CEJA330M10
C	235	CKSRYB332K50
C	236	CKSQYB473K16
C	237	CCSRCH120J50
C	239	CKSRYB472K50
C	240	CEJAR47M50
C	241	CKSQYB104K16
C	242	CEJAR47M50
C	243	CEJAR33M50
C	244	CKSQYB473K16
C	245	CKSRYB123K25
C	246	CKSQYB473K16
C	250	CCSRCH471J50

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=====Circuit Symbol and No.	===	Part Name	Part No.
E Unit Number :			
Unit Name :		Mute PCB	
SW	2	Mute Switch	1-0138-7087
C Unit Number :			
Unit Name :		SW PCB	
SW	3	Slide Switch	1-0036-7007
Miscellaneous Parts List			
HD	1	Head	10036-7016-1
M	1	Motor Assy	X-0036-6075
SW	1	Power Switch	1-0036-7034

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6. ADJUSTMENT

● Connection Diagram

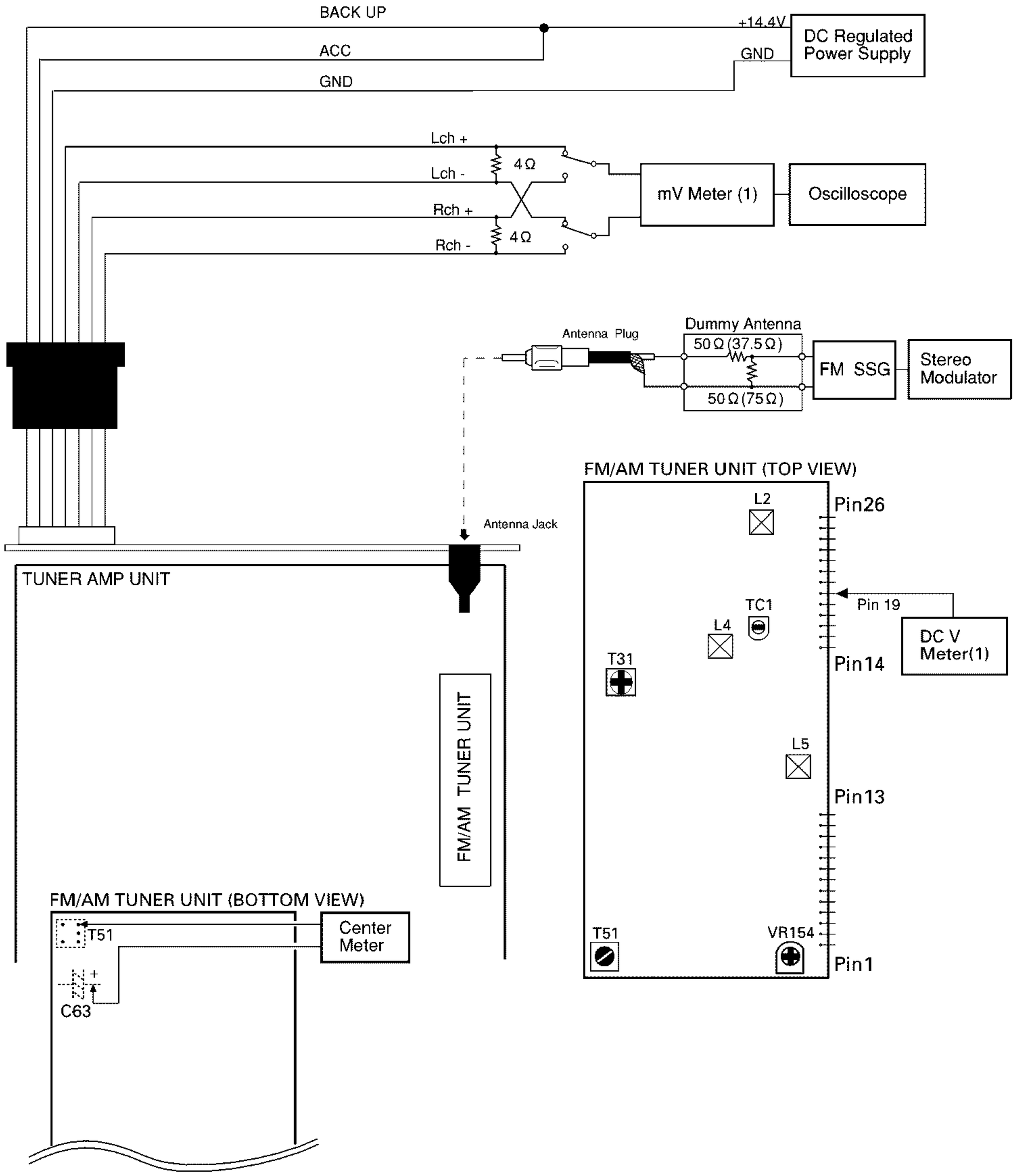

Fig. 16

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FM ADJUSTMENT

Modulation M:MONO MOD., 400Hz 30%(22.5kHz Dev.) or 400Hz 100%(75kHz Dev.)
S:STEREO MOD., 1kHz, L or R=30%(20.25kHz+7.5kHz Dev.)

NOTE:Before proceeding to further adjustments after switching power ON, let the tuner run for ten minutes to allow the circuits to stabilize.

	No.	FM SSG		Displayed	Adjustment	Adjustment Method
		Frequency(MHz)	Level(dBf)	Frequency(MHz)	Point	(Switch Position)
TUN Volt	1	•••••	•••••	108.0	L5	DC V Meter(1) : 6V
IF	2	98.1 M	60	98.1	T51	Center Meter : 0
ANT Coil	3	98.1 M	5	98.1	L2	mV Meter(1) : Maximum
RF Coil	4	98.1 M	5	98.1	L4	mV Meter(1) : Maximum
Image	5	129.3 M	60—80	107.9	TC1	mV Meter(1) : Minimum
IFT	6	98.1 M	5	98.1	T31	mV Meter(1) : Maximum (STEREO MODE)
ARC	7	98.1 S	40	98.1	VR154	mV Meter(1) : Separation 5dB (STEREO MODE)

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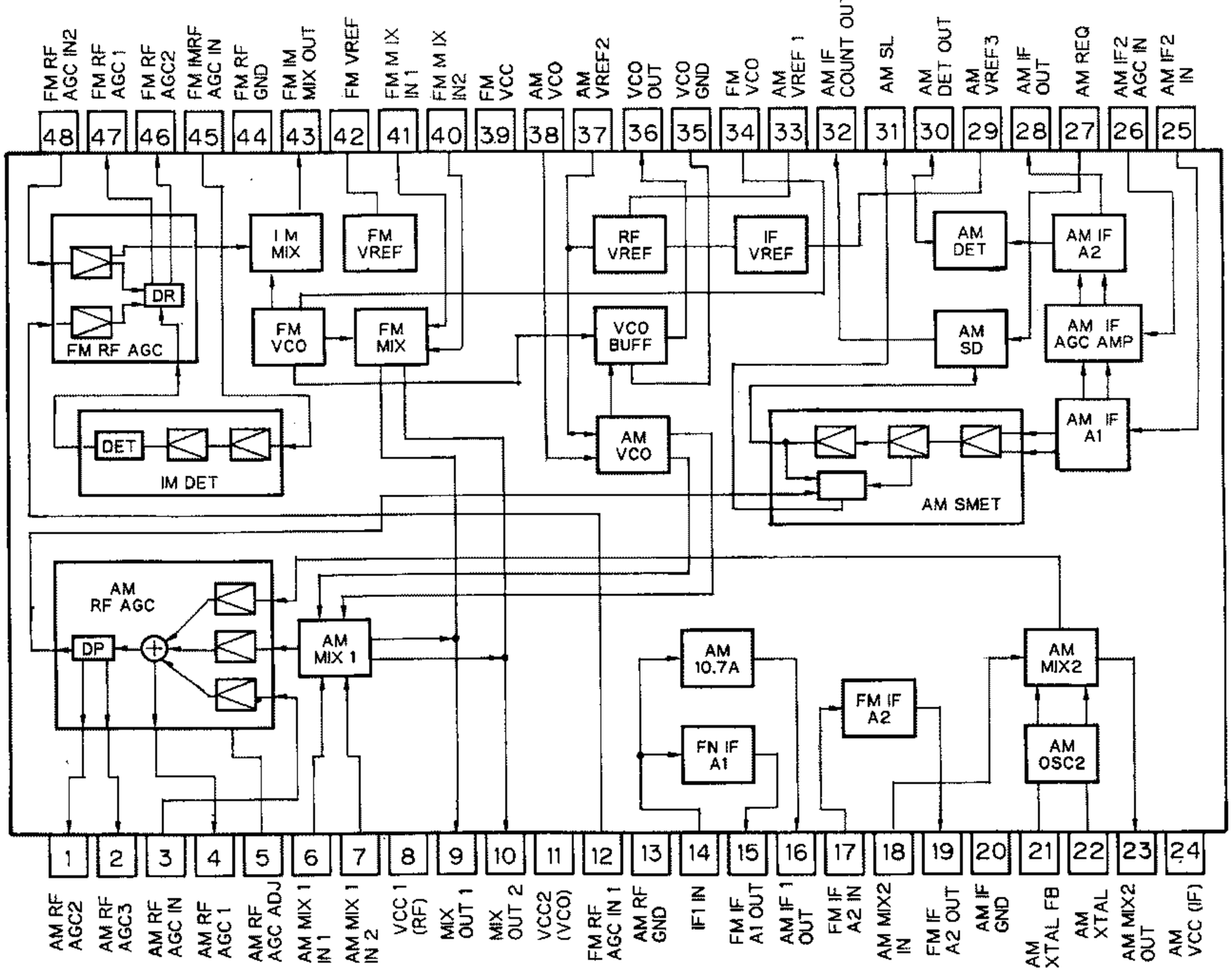
7. GENERAL INFORMATION

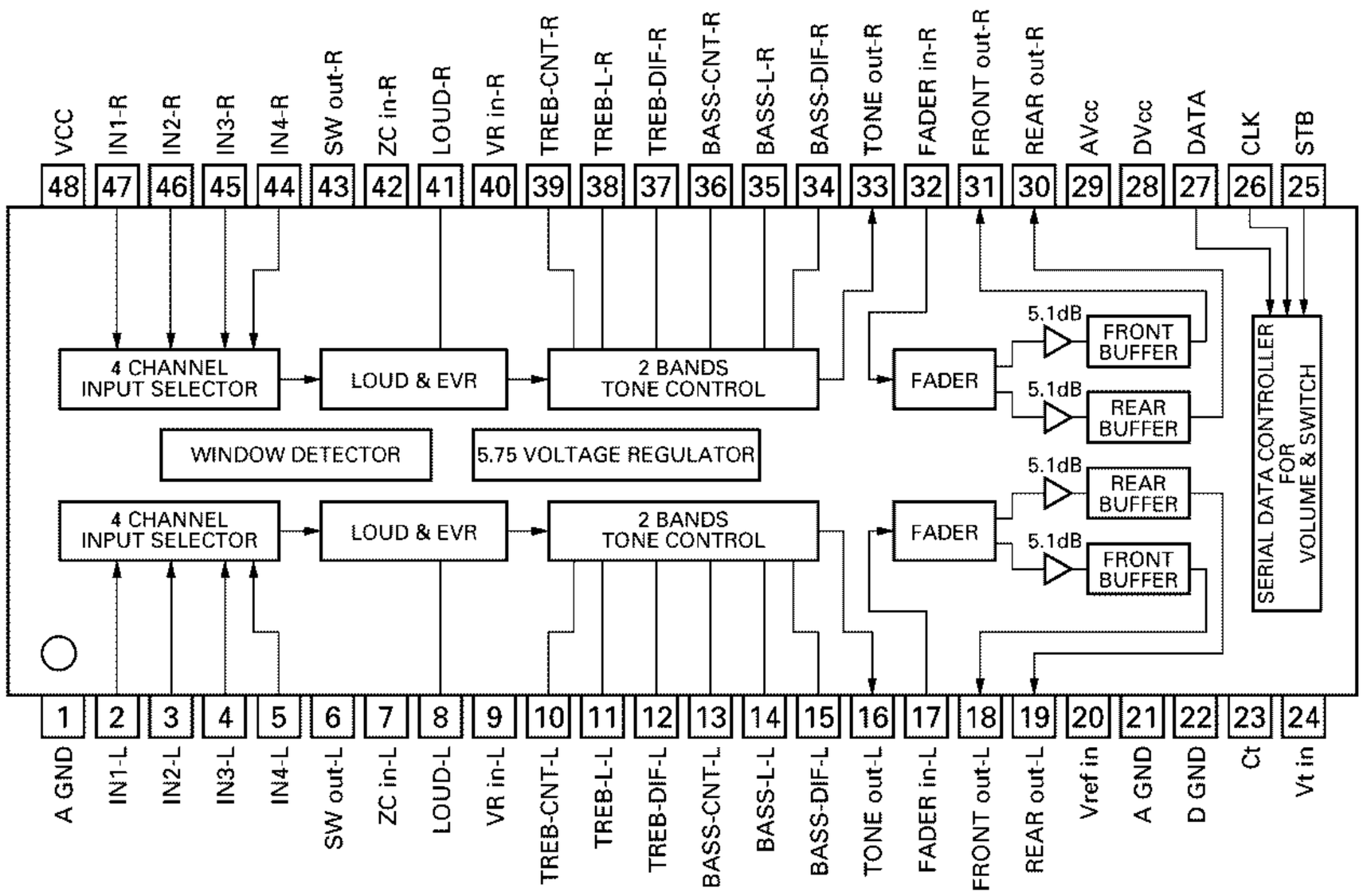
7.1 PARTS

7.1.1 IC

PA4023B



SN761027DL



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● Pin Functions (PD4875A)

Pin No.	Pin Name	I/O	Format	Function and Operation
1	$\overline{\text{MCMUTE}}$	I		Cassette mechanism mute input
2	$\overline{\text{TAPLD}}$	I		Tape loading input
3	EO	O	C	Error output
4	VDD1			Power supply
5	GND			GND
6	VCOIN	I		AM/FM VCO input
7	ASENS	I		ACC power sense input
8	VDD2			Power supply
9	LCK	I/O	C	Serial clock output for LCD driver
10	LDT	O	C	Data output for LCD driver
11	LDI	I		Key/LCD driver data input
12	FMSD	I		FM SD input
13	AMIF	I		AM IF signal input
14	SL	I		Signal level input
15	$\overline{\text{ST}}$	I		FM stereo input
16,17	NC			Not used
18	$\overline{\text{SWVDD}}$	O	C	Grille power supply control output
19	NC			Not used
20	VST	O	C	Strobe pulse output for electronic volume
21	VCK	O	C	Clock output for electronic volume
22	VDT	O	C	Data output for electronic volume
23	NC			Not used
24	XO	O		Crystal oscillator connection pin
25	XI	I		Crystal oscillator connection pin
26	GND			GND
27–30	NC			Not used
31	TESTIN	I		Test program mode input
32	$\overline{\text{DSENS}}$	I		Grille detach sense input
33,34	GND			GND
35–38	NC			Not used
39	$\overline{\text{MUTE}}$	O	C	System mute output
40	DMINH	O		Mechanism mute cancel output
41,42	NC			Not used
43	SYSPW	O	C	System power supply control output
44–48	NC			Not used
49	MS			Not used
50	MECPW	O	C	Cassette mechanism power output
51	AM	O	C	AM power control output
52	LOCL	O	C	LOC “L“ output
53	LOCH	O	C	LOC “H” output
54	FM	O	C	FM power control output
55	$\overline{\text{SEEK}}$	O	C	Seek output
56	NC			Not used
57	LW	O	C	LW output
58	GND			GND
59,60	NC			Not used
61	DM1	I		Model,function input
62	DM0	I		Model,function input
63	NOR/$\overline{\text{REV}}$	I		Tape running input
64	GND			GND

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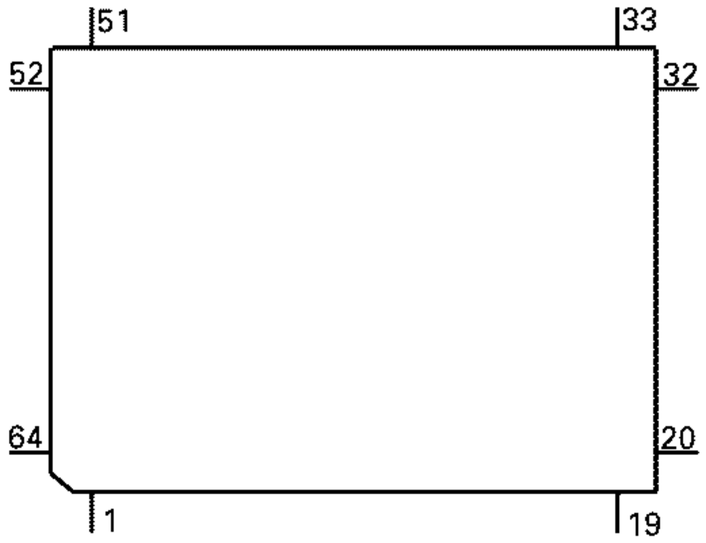
*PD4875A



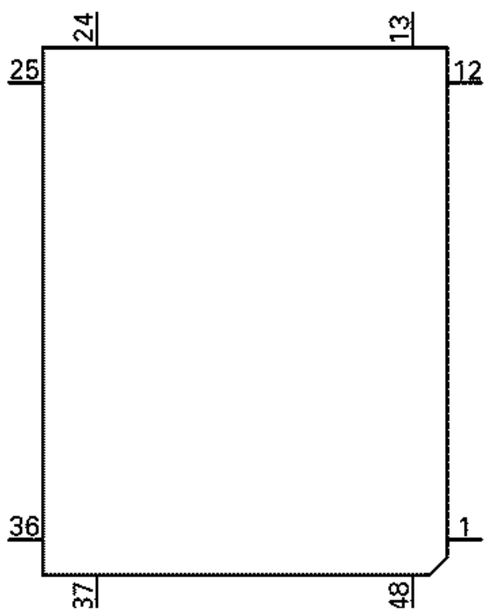
IC's marked by* are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

Format	Meaning
C	C MOS

● Pin Functions(PDC045A)

Pin No.	Pin Name	I/O	Function and Operation
1–4	NC		Not used
5–8	KS4-1	O	Key strobe output
9–12	KD4-1	I	Key data input
13	SI	I	Display data input
14	SO	O	Key data output
15	SCK	I/O	Clock input terminal for serial data input and output
16	REMIN	I	Remote control reception
17	RES	I	Reset input
18	TEST	I	Test input
19	OSC-IN	I	System clock input
20	OSC-OUT	O	System clock output
21	GND		GND
22,23	VDD2,1		LCD power supply
24	VDD		Power supply
25–28	COM1-4	O	LCD common signal
29–42	SEG1-14	O	LCD segment signal
43–48	NC		Not used

*PDC045A



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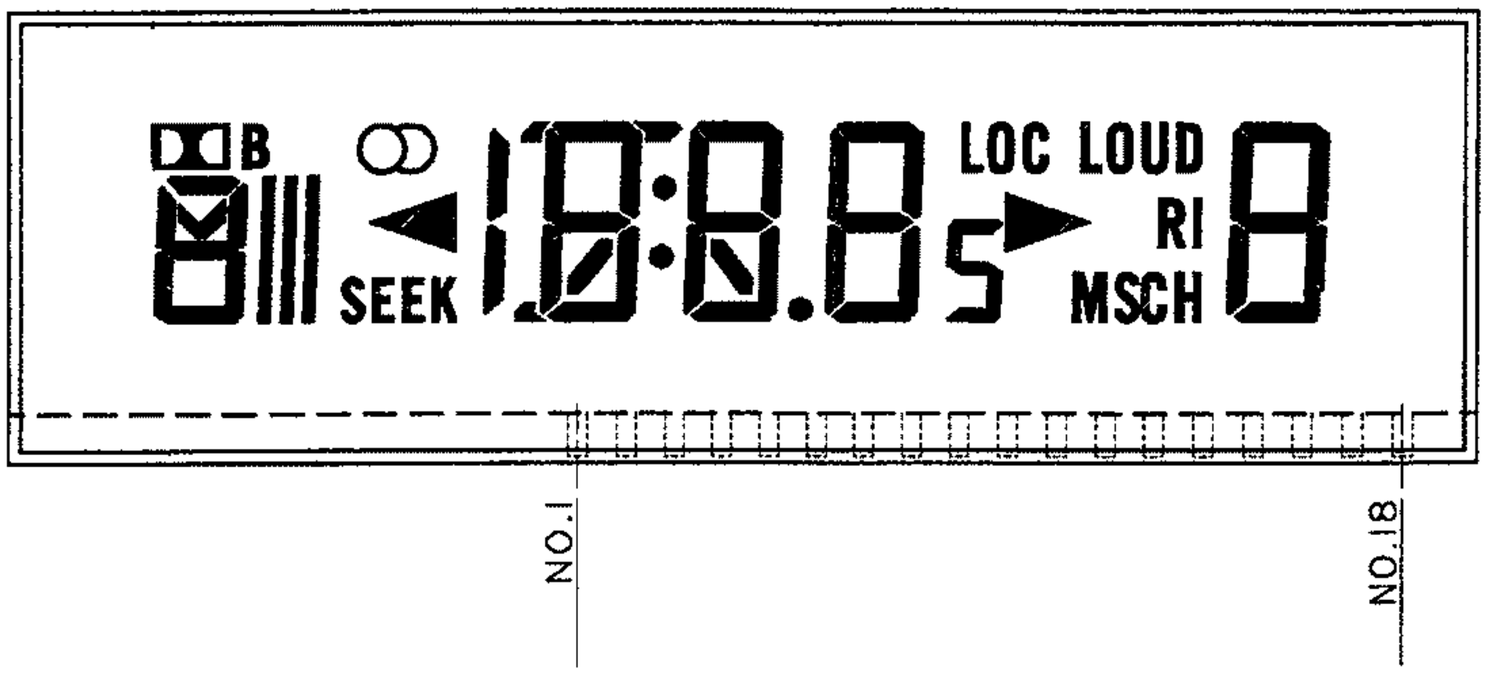
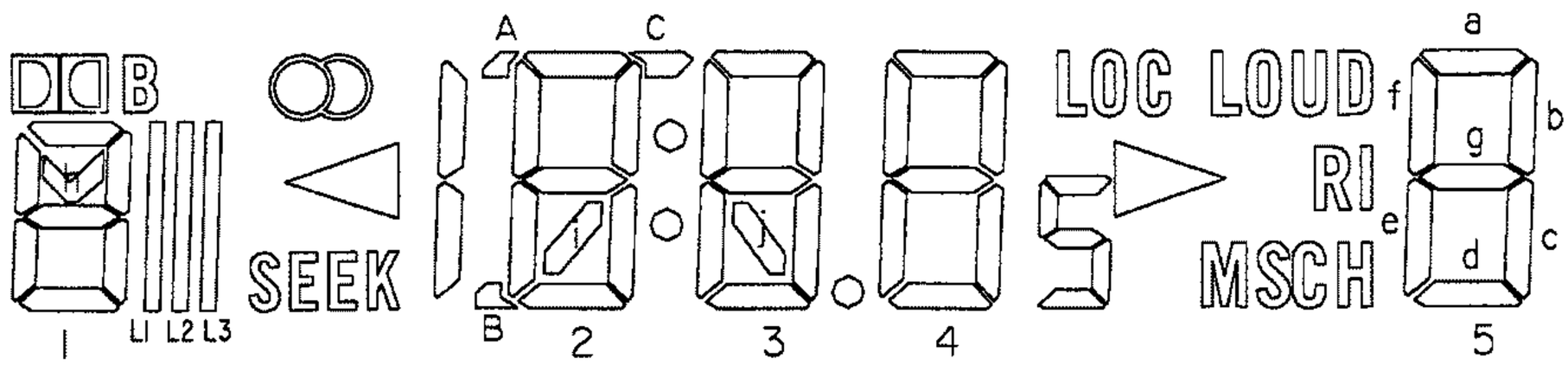
7.1.2 DISPLAY

● CAW1462





NO.	COM.1	COM.2	COM.3	COM.4
1				COM.4
2			COM.3	
3		COM.2		
4	COM.1			
5	1f	1h	1a	▣B
6	1e	1g	1b	◎
7	1d	1c	L1	L2,L3
8	SEEK	◁	∫	A,B
9	2i	2e	2f	2a
10	2d	2c	2g	2b
11	3j	3e	3f	3a
12	3d	3c	3g	3b
13	∘	4e	4f	4a
14	4d	4c	4g	4b
15	▷	5	∘	C
16	MS	RI	LOUD	LOC
17	CH	5e	5f	5a
18	5d	5c	5g	5b

Fig. 17

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7.2 DISASSEMBLY

● Removing the Case(not shown)

1. Insert and turn a screwdriver to remove the case.

● Removing the Mechanism Assy (not shown)

1. Remove the four screws.
2. Disconnect the connector, and then removing the Mechanism Assy.

● Removing the Detach Grille Assy(Fig.18)

1. Disengage the stopper at two locations indicated by arrows.
2. Remove the Detach Grille Assy.

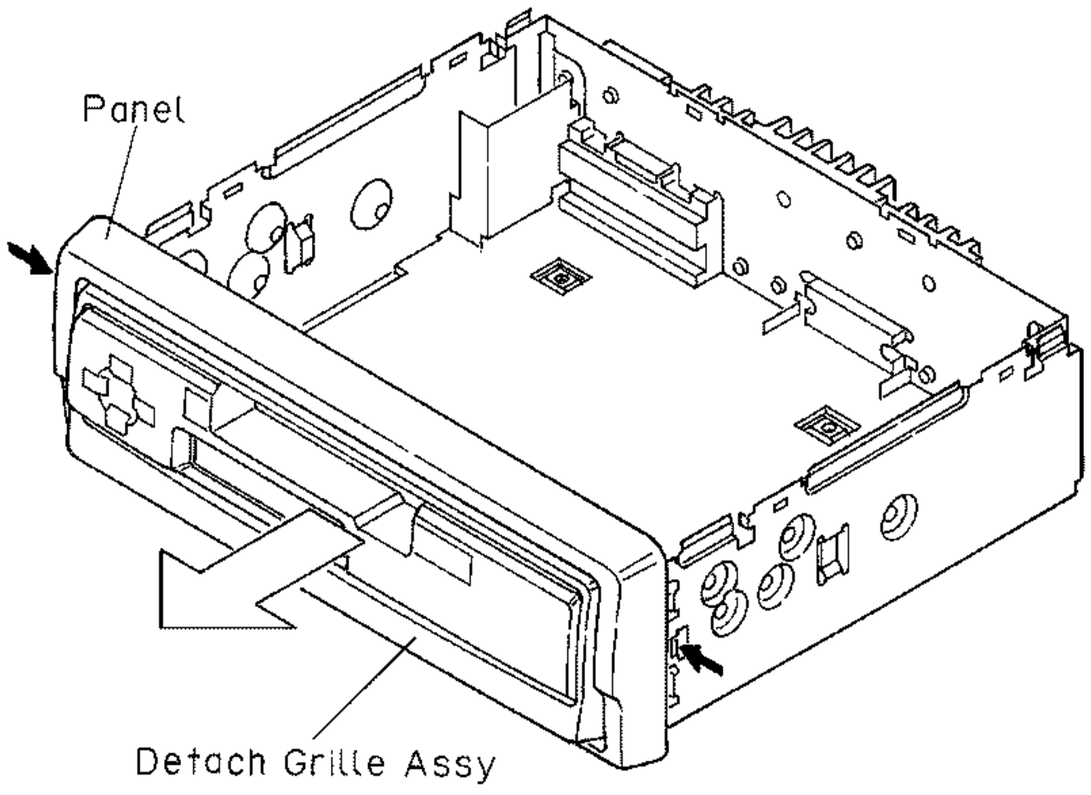

Fig. 18

● Removing the Tuner Amp Unit(Fig.19)

1. Removing the three screws A.
2. Unbend the tabs at four locations indicated by arrows until straight.
3. Remove the Tuner Amp Unit.

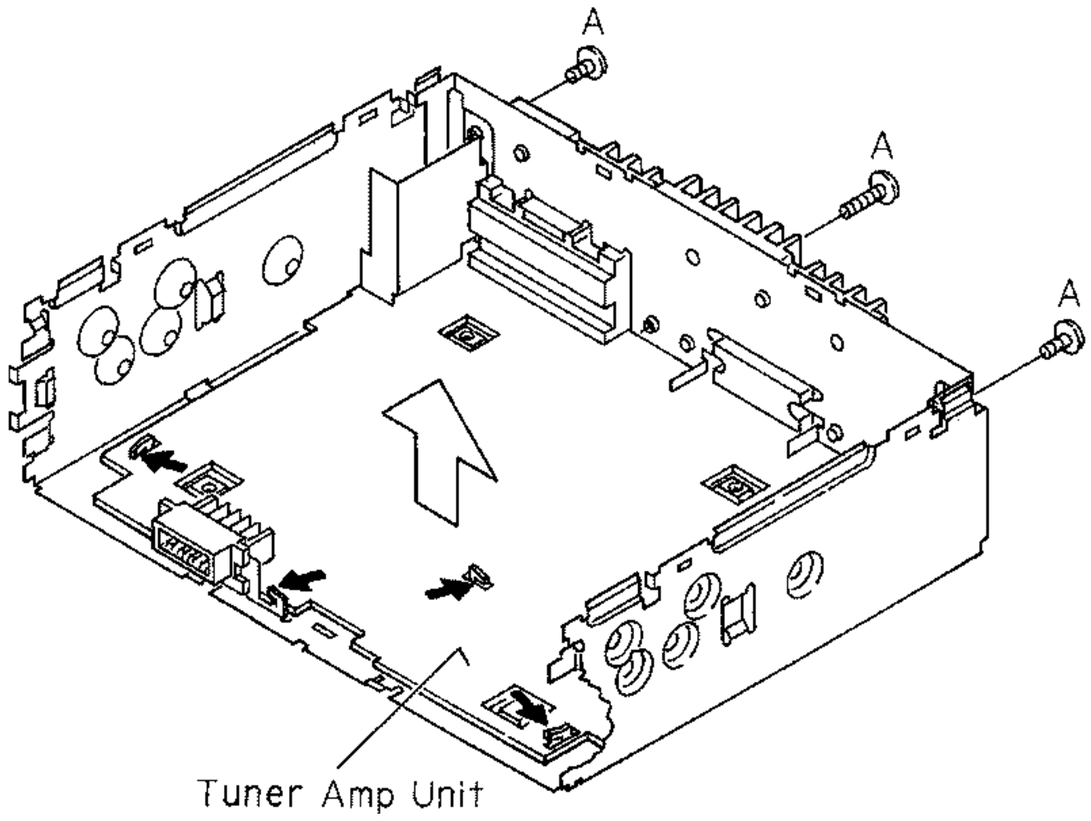

Fig. 19

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7.3 BLOCK DIAGRAM

● KEH-1700/X1M/EW

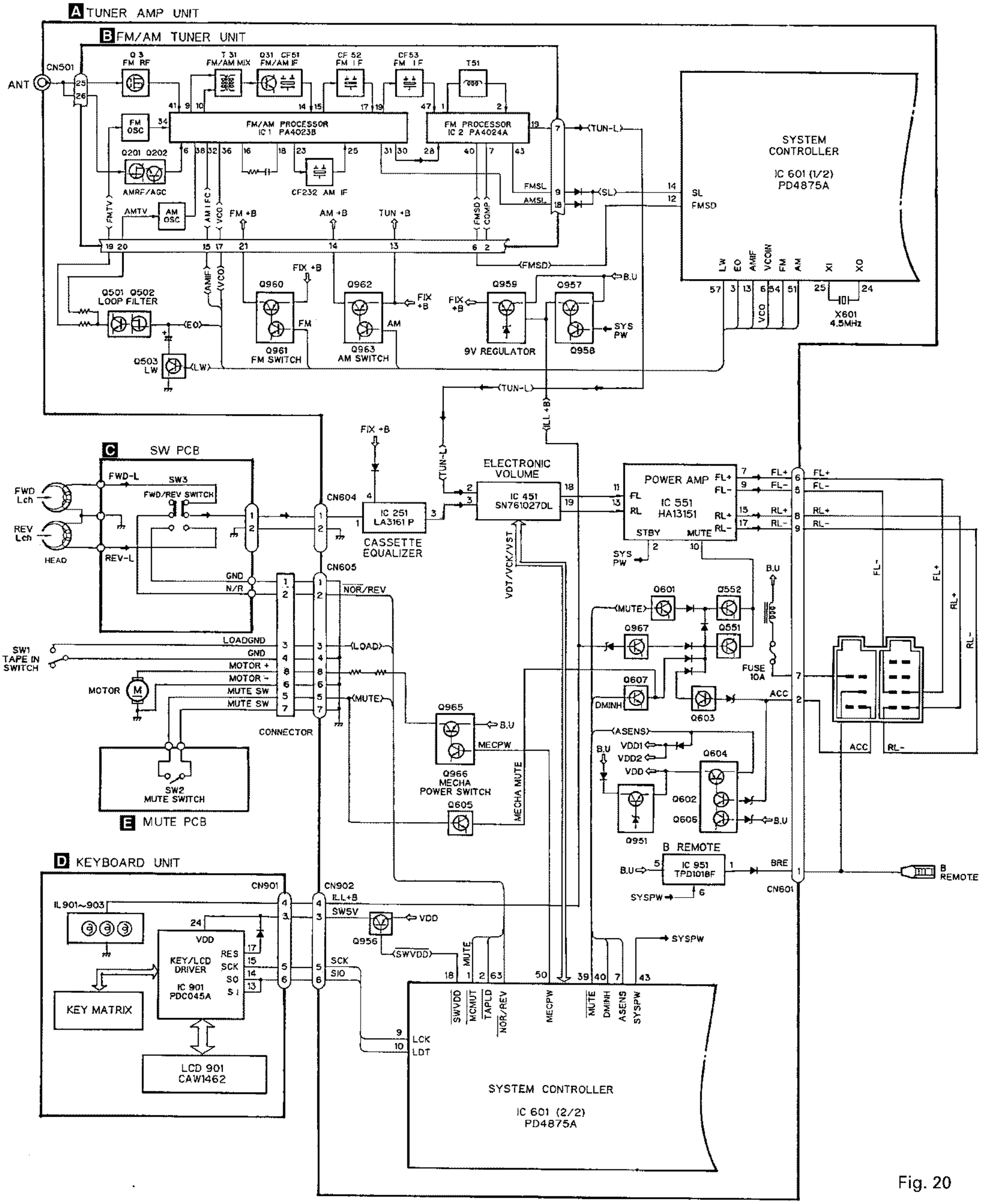

Fig. 20

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8. OPERATIONS AND SPECIFICATIONS

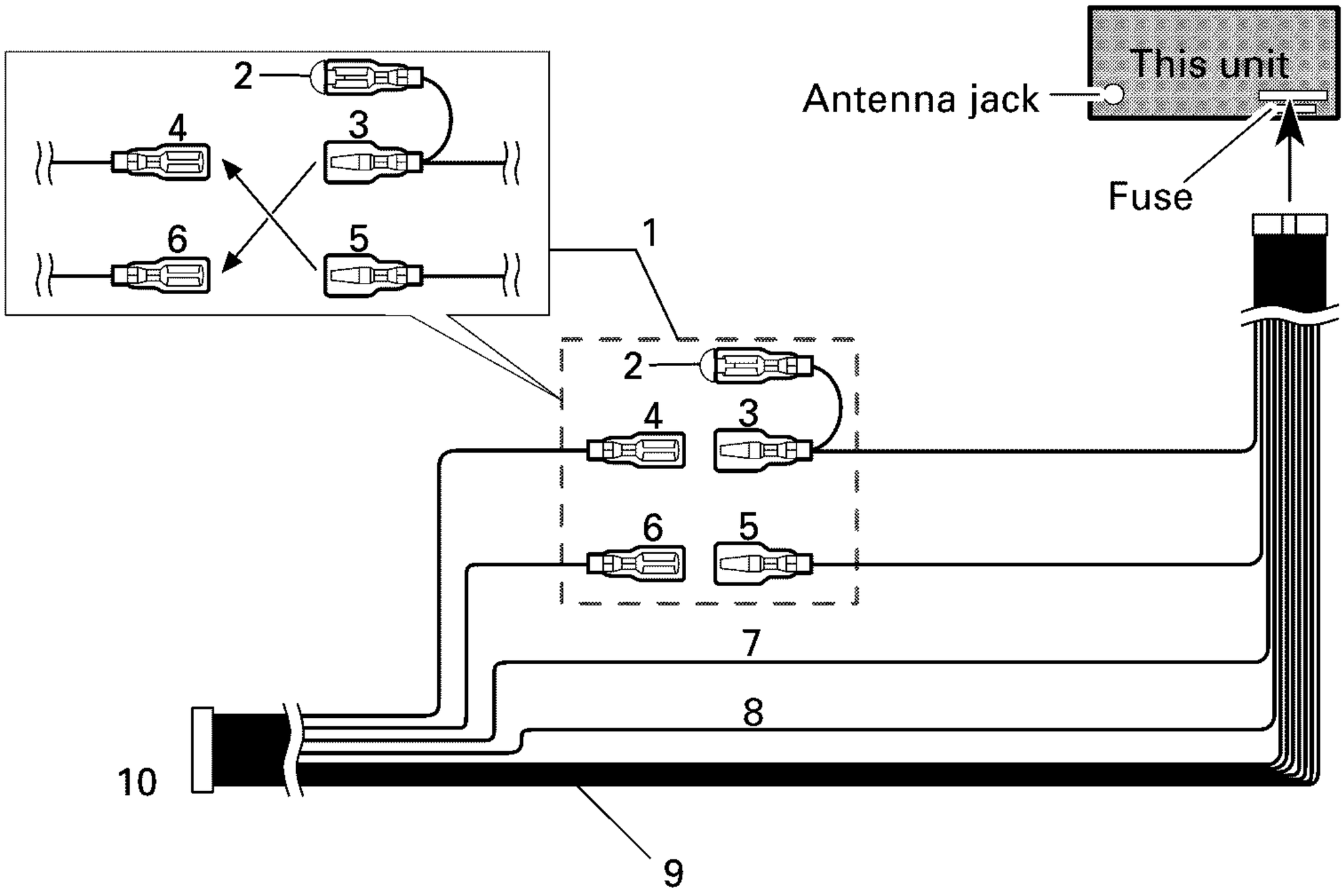

Fig. 21

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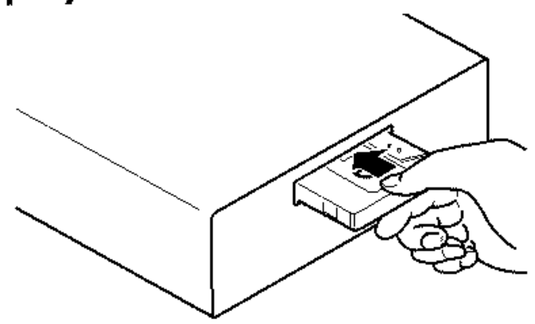
Power ON/OFF

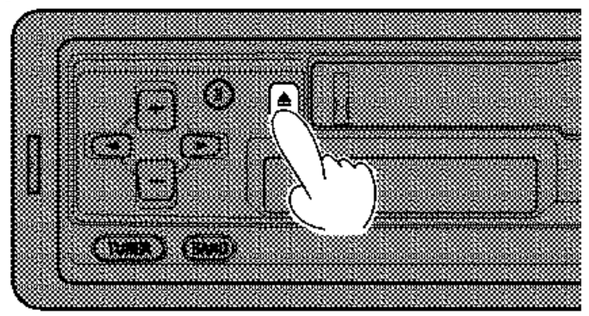
Tape

To play



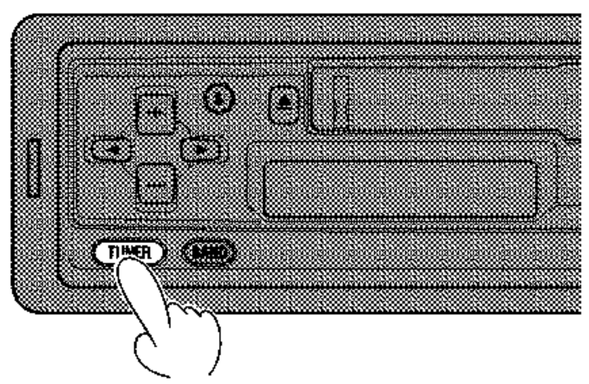
Insert a cassette tape through the cassette door, the power comes on and the tape starts to play automatically.

Eject



Press the [⏏] button.

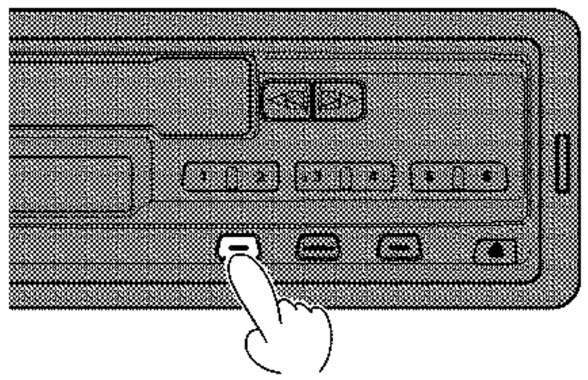
Radio



Press the [TUNER] button to switch the tuner ON/OFF.
- You cannot switch to "TUNER" when a tape is loaded.

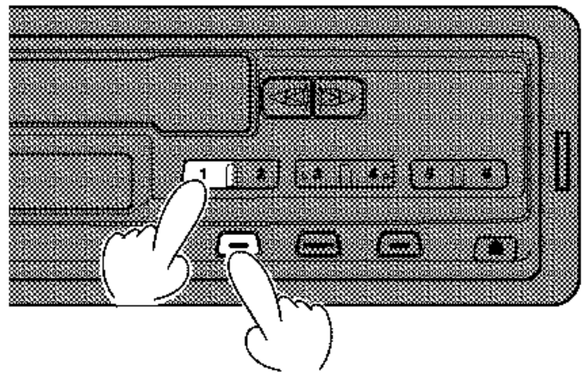
Using the Clock

Displaying the Time



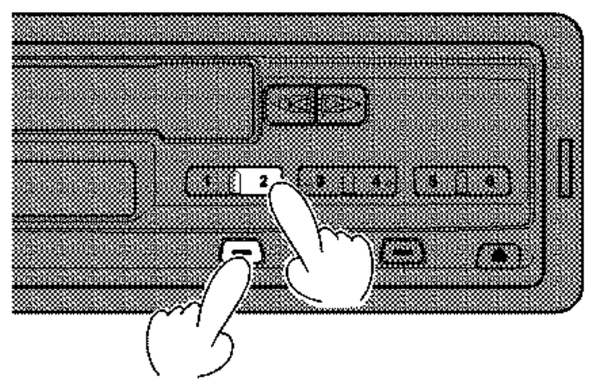
Press the [CLOCK] button to turn the clock ON/OFF.
- The clock cannot be displayed when the POWER is OFF.
- When you perform another operation, the clock temporarily disapears from the display. The clock display is restored approximately 25 seconds after the operation.

To adjust the hour



Hold down the [CLOCK] button and press the [1] button while the clock is displayed.
- You can adjust the hour successively by pressing the [1] buttons while holding down the [CLOCK] button.

To adjust the minute



Hold down the [CLOCK] button and press the [2] button while the clock is displayed.
- You can adjust the minute successively by pressing the [2] buttons while holding down the [CLOCK] button.
- The seconds start at "0" When you release the [CLOCK] button.

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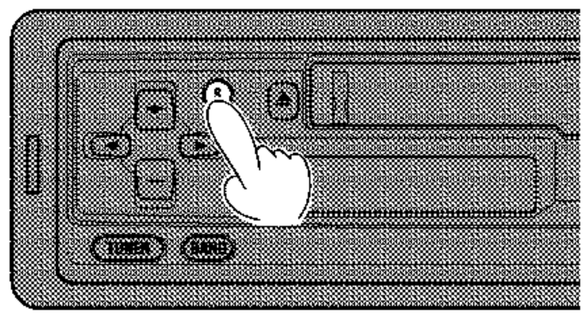
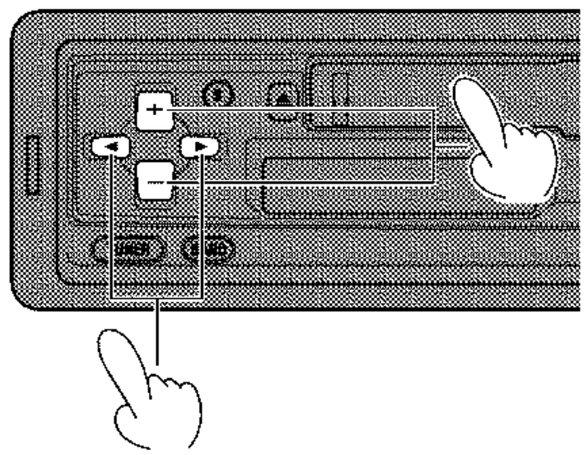
Adjusting Volume and Tone

Mode Selection



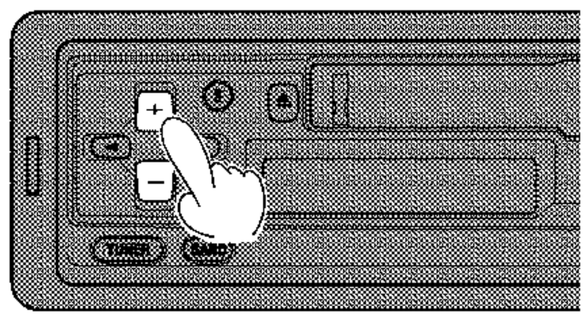
Each press of the [S] button changes the mode as follows:
Fader adjustment (F:) — Tone adjustment (T:) — Volume adjustment (V:)
- Fader, Balance, Treble and Bass settings stop temporarily at the center position.
- If no operations are performed within 8 seconds, adjustment modes are cancelled. Make adjustments within 8 seconds.

Fader/Balance



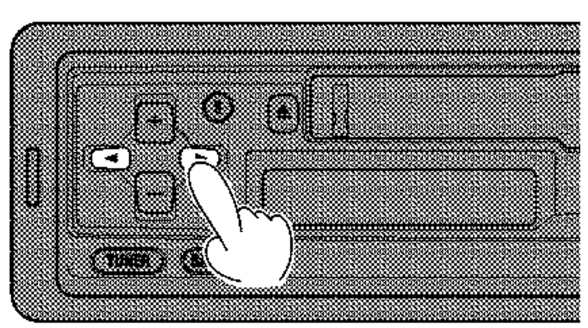
Press the [◄] or [►] button when in the Fader mode, and the Balance mode "B:" is indicated in the display. Press the [+] or [–] button when in the Balance mode, and the display changes to "F:", indicating that you have switched to the Fader mode.

Fader



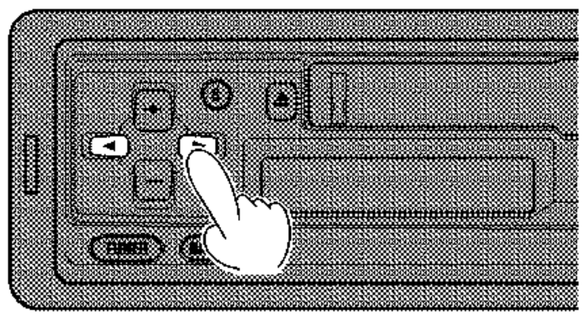
[+]: Shifts the sound toward the front speakers.
[–]: Shifts the sound toward the rear speakers.
(Display shows "F:F9" ~ "F:R9".)
- Please set to "F: 0" when using a 2 speaker system.

Balance



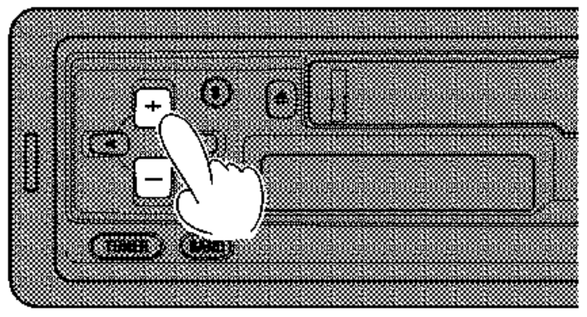
[►]: Shifts the sound toward the right speakers.
[◄]: Shifts the sound toward the left speakers.
(Display shows "B:L9" ~ "B:R9".)

Bass/Treble



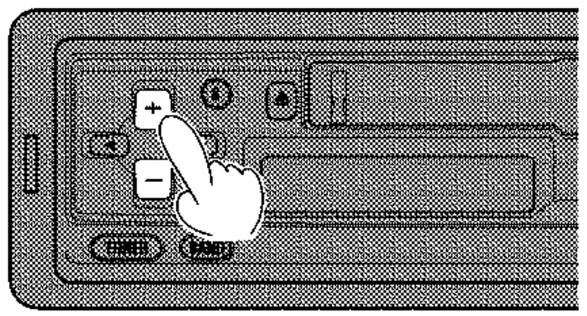
Press the [◄] button when in the Treble mode, and the Bass mode "B:" is indicated in the display. Press the [►] button when in the Bass mode, and the display changes to "T:" indicating that you have switched to the Treble mode.

Adjusting Bass/Treble



[+]: Boosts
[–]: Attenuates
(When in the Treble mode, the display shows "T:–6" ~ "T: 6". When in the Bass mode, it shows "B:–6" ~ "B: 6".)

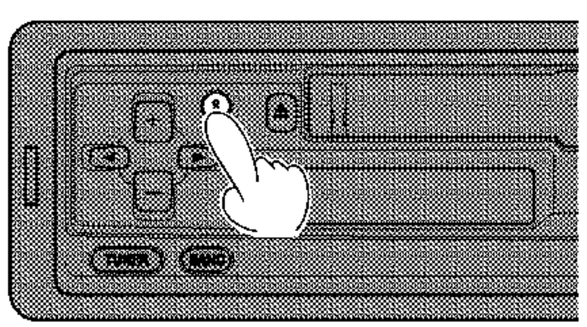
Volume



Pressing the [+] button increases the volume, while the [–] button decreases it.
(Display shows "V: 0" ~ "V: 31".)
- When driving your vehicle, be sure to keep the volume of the unit set low enough to allow you to hear sounds coming from outside.

Loudness

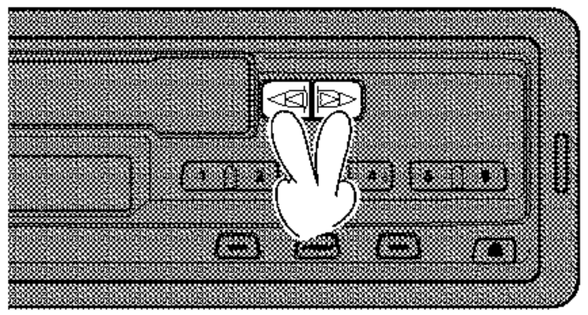
This function enhances both the high and low ranges of sound to give even more power to output at low volume.



Press the [S] button for 2 seconds to turn Loudness ON/OFF.
"LOUD" appears in the display when the Loudness function is turned ON.
"LOUD" goes out when the Loudness function is turned OFF.

Using the Tape Deck

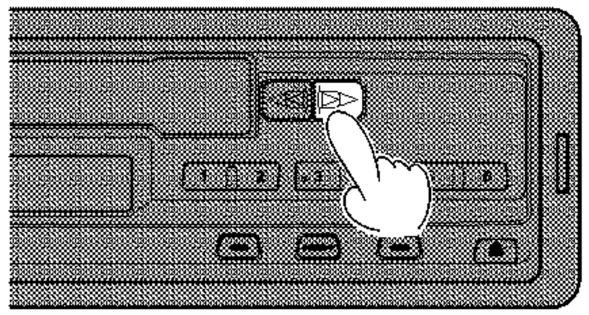
To Change Sides



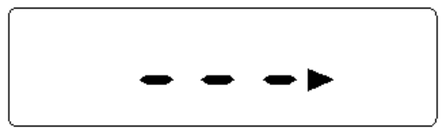
Press the [◄◄] and [►►] buttons at the same time.

Fast Forward/Rewind

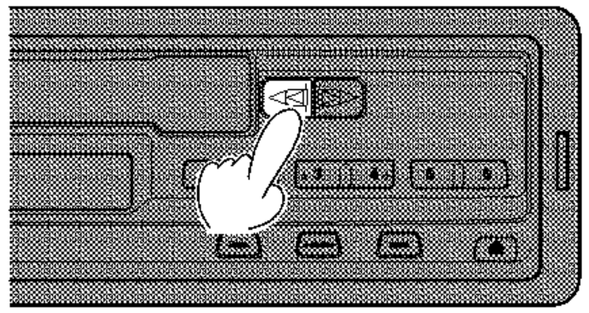
Fast forward



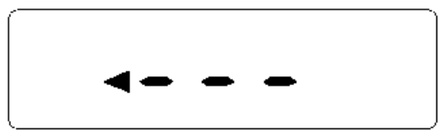
Press the button for the same direction as the tape play indicator.



Rewind



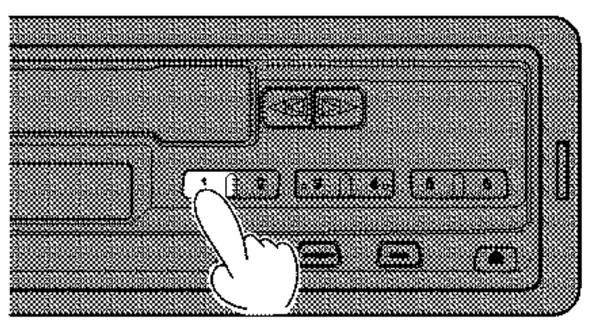
Press the button for the opposite direction as the tape play indicator.



- To release fast forward/rewind, lightly press the [◄◄] or [►►] button located on the opposite side of the one you pressed to fast forward or rewind.
- " ◄ ▬ ▬ ▬► " flashes when the tape is fast forwarding or rewinding.

Radio Intercept

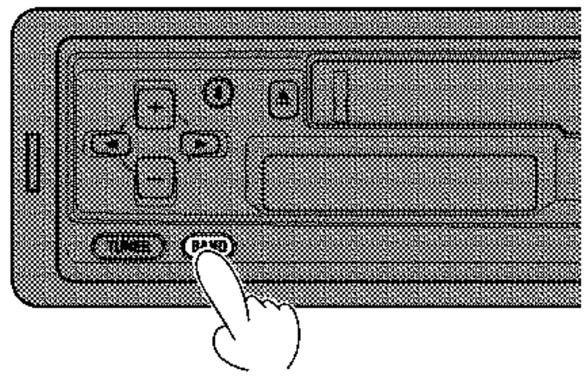
This function lets you listen to the radio while playing, fast forwarding, or rewinding a tape.



Press the [1] button to turn radio intercept ON/OFF.
"RI" appears in the display when the radio intercept function is turned ON.
"RI" goes out when the radio intercept function is turned OFF.

Using the Radio

Selecting a Band

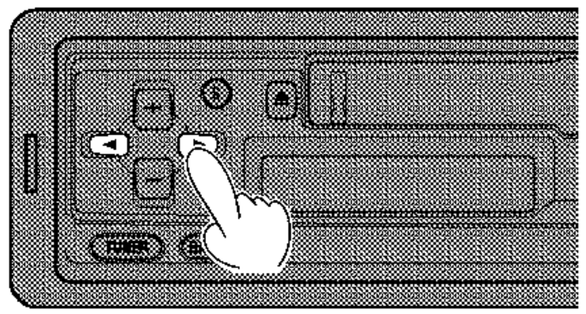


Press the [BAND] button to select a band.

►F Ⅰ→F Ⅱ→F Ⅲ→M/L
(FM1) (FM2) (FM3) (MW/LW)

Use the [◄] and [►] buttons to switch between MW and LW.
MW : 531 — 1,602 kHz
LW : 153 — 281 kHz

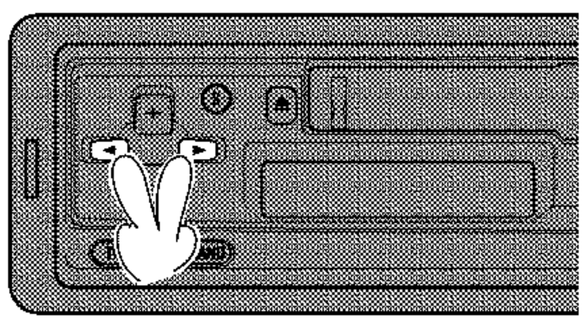
Seek Tuning



[◄]: Automatically selects a lower frequency station.
[►]: Automatically selects a higher frequency station.
("SEEK" lights in the display.)

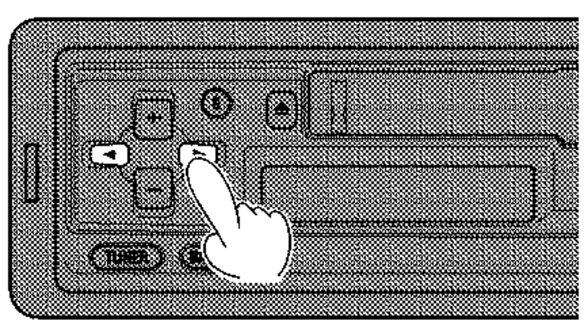
Manual Tuning

1.



Press both [◄] and [►] buttons at same time.
("SEEK" goes out from the display.)
- Each time you repeat this operation, "SEEK" either lights or goes out.

2.



[◄]: Use to select lower frequencies.
[►]: Use to select higher frequencies.
Continue pressing the button to move up or down continuously through frequencies.
- Tuning moves up or down in 50 kHz steps for FM, 9 kHz steps for MW and 1 kHz steps for LW.

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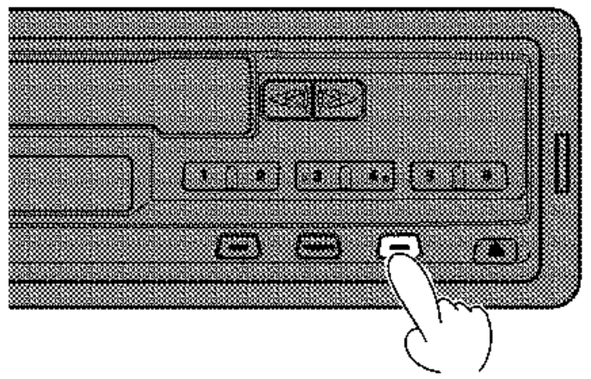
Adjusting Seek Sensitivity

The seek tuning function of this tuner lets you select between a local setting for reception of strong stations only, and a DX (distant) setting for reception of weaker stations.

The local setting also has 4 seek tuning sensitivity levels for FM and 2 levels for MW/LW to match local conditions

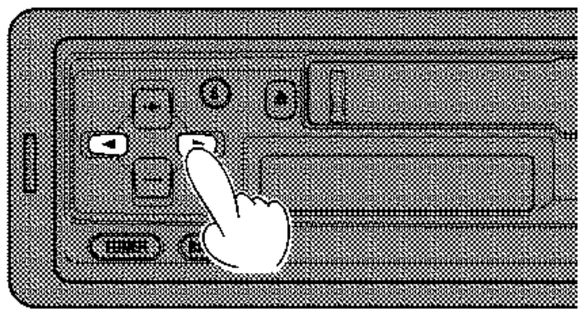
Changing the local seek sensitivity

1.



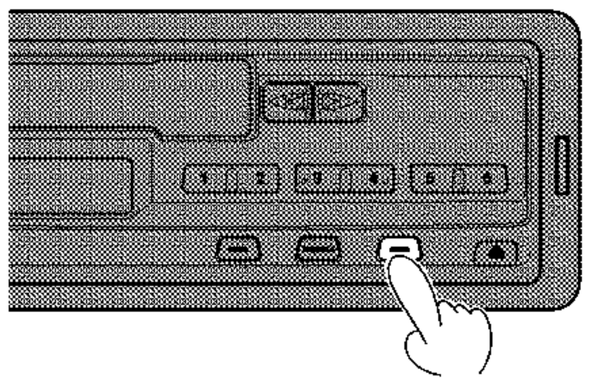
Select the desired band, and press the [LOC] button for more than 2 seconds.
(The local seek level is indicated in the display for about 5 seconds.)

2.



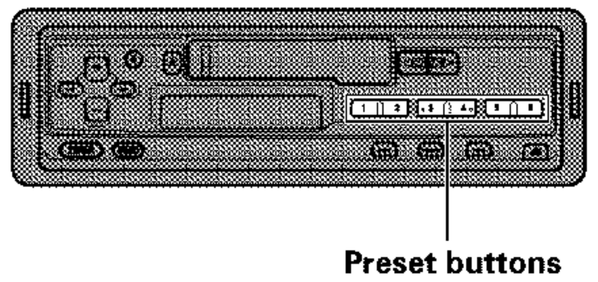
[►]: Raises the sensitivity level.
[◄]: Lowers the sensitivity level.
FM :L-1 ⇄ L-2 ⇄ L-3 ⇄ L-4
MW/LW:L-1 ⇄ L-2
The L-4 setting allows reception of only the strongest stations, while lower settings let you receive progressively weaker stations. Adjust the sensitivity while the local seek indication is displayed (5 seconds).

Switching between local and DX



Press the [LOC] button.
Each time you press the button, you switch between local and DX.
Local position:"LOC" is displayed.
DX position :"LOC" is not displayed.

Preset Memory



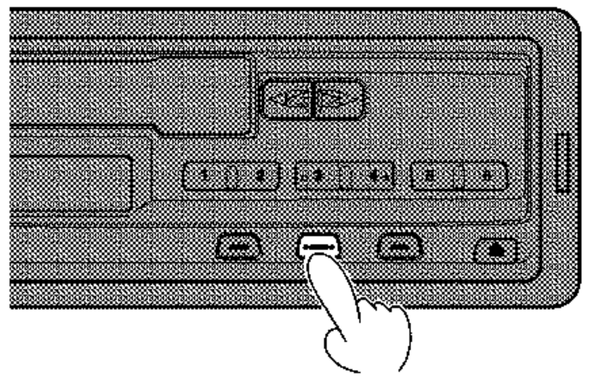
Tune into the station you want to memorize, and press the desired preset button for 2 seconds or more.
FM :18 stations can be memorized (6 stations each for FM1/FM2/FM3.)
MW/LW :6 stations can be memorized.

To recall a memorized station, briefly press the preset button for the station you desire. (The selected preset number lights in the display.)

BSM (Best Stations Memory)

This function automatically locates stronger stations and automatically assigns their frequencies to preset buttons [1 – 6], in order of strength.

It comes in handy when trying to find local stations while driving.



Select the desired band, and press the [BSM] button for 2 seconds or more.
(" ▬ ▬ ▬ " flashes in the display until BSM operation is completed.)
- If there are fewer than 6 strong stations in the area, some of the preset buttons will not be assigned frequencies, so they will retain any frequencies assigned to them previously.

Specifications

General
Power source ..... 14.4 V DC (10.8 — 15.1 V allowable)
Grounding system ..... Negative type
Max. current consumption ..... 6.0 A
Dimensions (chassis) ..... 178 (W) × 50 (H) × 150 (D) mm
(front face) ..... 188 (W) × 58 (H) × 19 (D) mm
Weight ..... 1.4 kg

Amplifier
Maximum power output ..... 22 W × 4
Continuous power output ..... 14 W × 4 (DIN45324, +B = 14.4 V)
Load impedance ..... 4 Ω (4 — 8 Ω allowable)
Tone controls (bass) ..... ±12 dB (100 Hz)
(treble) ..... ±12 dB (10 kHz)
Loudness contour ..... +10 dB (100 Hz), +7 dB (10 kHz) (Volume: –30 dB)

Tape player
Tape ..... Compact cassette tape (C-30 — C-90)
Tape speed ..... 4.76 cm/sec.(+0.14 cm/sec.,-0.05 cm/sec.)
Fast forward/rewind time ..... Approx. 160 sec. for C-60
Wow & flutter ..... 0.13 % (WRMS)
Frequency response ..... 40 — 14,000 Hz (±3 dB)
Stereo separation ..... 45 dB
Signal-to-noise ratio ..... 52 dB (IEC-A network)

FM tuner
Frequency range ..... 87.5 — 108 MHz
Usable sensitivity ..... 11 dBf (1.0 µV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 16 dBf (1.7 µV/75 Ω, mono)
Signal-to-noise ratio ..... 70 dB (IEC-A network)
Distortion ..... 0.3 % (at 65 dBf, 1 kHz, stereo)
Frequency response ..... 30 — 15,000 Hz (±3 dB)
Stereo separation ..... 40 dB (at 65 dBf, 1 kHz)

MW tuner
Frequency range ..... 531 — 1,602 kHz
Usable sensitivity ..... 18 µV (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)

LW tuner
Frequency range ..... 153 — 281 kHz
Usable sensitivity ..... 30 µV (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)

Note:
Specifications and design are subject to possible modification without notice due to improvements.

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